SOAP and SANITARY CHEMICALS

In this issue...

Mildew prevention widens market for new chemicals

* * *

Soap advertising research basis for product claims

* * *

Sanitary supply buying—a southern market viewed

* * *

New flake form non-ionic detergents discussed.

* * *

Cover photo... Floating Flowers, a new idea in a pressed cake of floating toilet soap with the luxury touch, tinted shell pink, perfumed jasmin. Marketed by the Paul D. Newton Company, Newark, N. Y.

OCTOBER 1950

For All These Operations···

TILE CLEANING
BOTTLE WASHING
TEXTILE PROCESSING
METAL CLEANING
FOOD EQUIPMENT CLEANING
LAUNDRY SOAPS AND COMPOUNDS
TRUCK AND CAR WASHING
STEEL PICKLING
FLOOR SCRUBBING
DAIRY CLEANING
TEXTILE DYEING
CAUSTIC CLEANING
ACID CLEANING

NYTRON

TRADE-MARK REG. U.S. PAT. OFF.

The Synthetic Organic Detergent with the Most Versatile Combination of Properties

No Other Synthetic Organic Detergent Can Match NYTRON'S *Exclusive Combination of Properties!*

NYTRON HAS EXCEPTIONAL DETERGENCY; it is effective on an unusually wide variety of soils; it cleans efficiently in either hot or cold water and retains its detergent action when used in either acid or alkaline mediums.

NYTRON REDUCES WETTING TIME from a matter of hours required in plain water to a matter of seconds; produces splendid results under a wide variety of conditions.

NYTRON RINSES THOROUGHLY, QUICKLY in cool or even cold water; does not leave an insoluble deposit.

NYTRON COUNTERACTS HARD WATER difficulties; more economical because increased quantities do not have to be added to compensate for water hardness; completely prevents the formation of scum, grease rings, streaks, spots.

NYTRON REMAINS CHEMICALLY STABLE under extreme conditions of temperature, acidity or alkalinity; suffers no chemical breakdown or loss in detergency when used in solutions of either weak or caustic alkalies.

NYTRON HAS EXCELLENT POWER to remove oil and grease from fabrics, surfaces, metal parts.

NYTRON HAS HIGH AND RAPID SOLUBILITY; it goes into solution almost instantly in hot or cold water and will not "salt out" in concentrated solutions of many acids, alkalies or metallic salts.

NYTRON REDUCES SURFACE TENSION even under extremely varying conditions; addition of only 3½ ounces to 100 gallons of water will reduce surface tension by more than 50%; this action is actually enhanced under hard water conditions.

NYTRON WILL FOAM in any normal concentration of acid or alkali, in distilled or sea water, in ice cold or boiling water.

A SOLVAY PRODUCT

Samples of NYTRON are available on request. Mail coupon for sample, further information.

SOLVAY SALES DIVISION, Allied Chemical & Dye Corporation
40 Rector Street, New York 6, N. Y.

I want to know more about NYTRON, the Synthetic Organic Detergent with the exclusive combination of properties. Please send me a free sample plus non-technical information and specific technical data.

Name_____
Title_____
Company_____
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City_____ Zone_____ State_____

PLUSTRE WAX

Plustre Wax has Lustre PLUS . . . everything a good wax must have. You get a gleaming, durable finish with Plustre, a slip-retardant surface and Plustre is built to withstand wet traffic abrasion.

When wet weather comes, many waxes go! Plustre is a wax which will remain shining and firm despite wet feet walking across its surface.

Plustre is built that way . . . built to last and last in all kinds of weather and is outstanding for wet traffic abrasion wear.

. . . and Plustre is a low price wax! Sold only through recognized jobbers. Write today for prices and literature.

Liquid and Self-Polishing

Everything a wax should be.....

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702 South Wolfe St. Baltimore 31, Md.

Los Angeles Calif.

Manufacturers of Sanitary Maintenance Chemicals

A GUIDE

TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE

An honest appraisal of floor wax products as we see it is offered to guide wax buyers who want the best quality money can buy...

SELF POLISHING WAXES

Candy's Supreme—Candy's Supreme Special AS

Candy's DeLuxe—Bright Beauty

Four floor waxes that *are* all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty FLOOR CLEANER

An outstanding material for removing even the heaviest wax film and dirt.... Brings neglected floors "back to normal." The *right* cleaning agent to insure the most efficient floor maintenance.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits *repeated repolishing* with a dry cloth saving reapplications time and again: truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry-Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable) bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver *without* abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove . . . also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really *cleans* and *scours* more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection.

1. BEAUTY AND DURABILITY

should be considered together. Initial appearance is important, but for a waxed surface to remain beautiful it must be durable. Durability depends not only on resistance to the abrasion of traffic, but even more so on resistance to the collection of dirt and to discoloring traffic marks. Durability is really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a matter of safety underfoot. This important quality does not necessarily require the sacrifice of beauty and protection which are the foremost original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of removing surface dirt. Overdoing this quality means greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

when expressed in percentage is not nearly as important as the *quality* of the solid content. When considering good quality, 12% of solids answers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However, the more concentrated material is useful for some programs of maintenance and particularly on "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in our floor waxes. When refined and compounded with other important ingredients and "KNOW HOW," it aids materially in producing the most important features of a good floor wax... ALL AROUND QUALITY OF PERFORMANCE.

● ALL AVAILABLE FOR PRIVATE BRAND ONLY
We do not compete with our jobbers for consumer sales.
We sell only to distributors, except for experimental accounts in Chicago essential to research.

Wax Specialists for over 55 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

SOAP and SANITARY CHEMICALS

Volume XXVI
Number 10
October 1950

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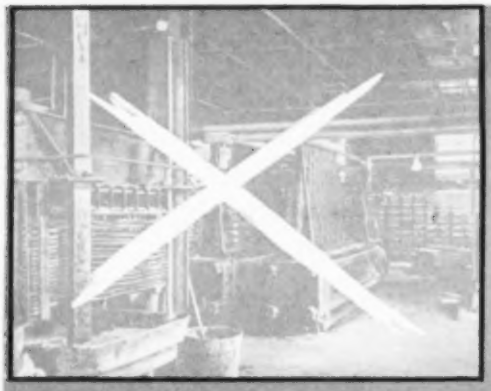

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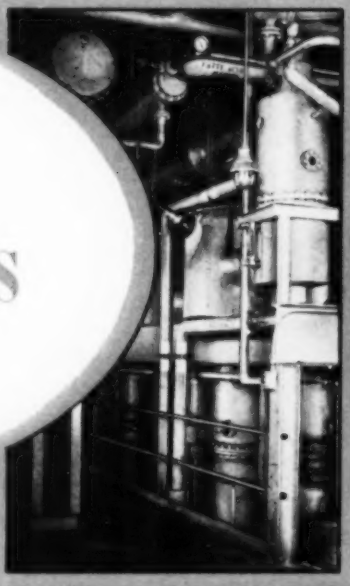

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- Freedom from metal contamination
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- Freedom from mineral acidity

The exclusive Emersol process of selective solvent crystallization completely outmodes old-fashioned pressing methods and makes possible stearic acids with these new standards of quality which reflect in higher quality finished products.

These advantages are present in all Emersol processed acids: Emersol 110 Stearic Acid, Emersol 120 Standard Stearic Acid, Emersol 130 Lily Stearic Acid, Emersol 132 Lily Stearic Acid, Emersol 150 Stearic Acid, and Emersol 140 Palmitic Acid. In addition, the price of Emersol 132, a premium quality acid with a 1.0 max. iodine value, has now been reduced to the level of Emersol 130 and competitive triple-pressed types.

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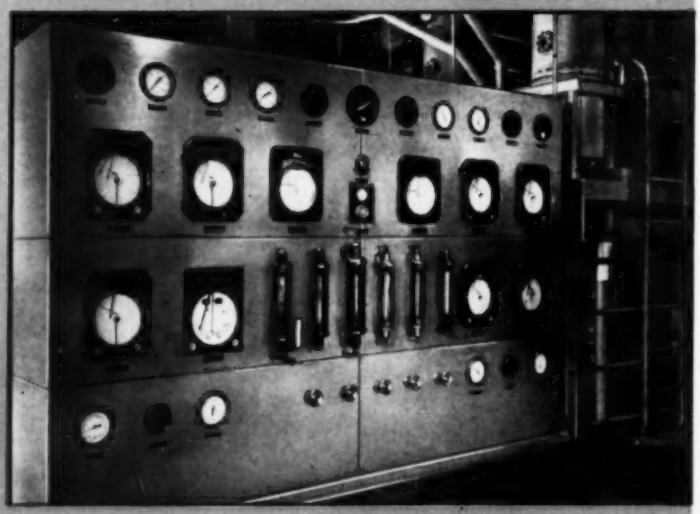

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SANTOPHEN 1

WITHOUT SANTOPHEN 1, rug shampoo removes dirt, but germs remain alive and active. Bacteria count, 8,000,000 per square yard.

WITH SANTOPHEN 1, rug shampoo both cleans and destroys germs. Bacteria count is reduced from 8,000,000 per square yard to 16 per square yard.

There's a constantly growing list of on-location rug shampoos that are gaining germ-killing power by the addition of small amounts of Monsanto Santophen 1. Formulators of these products are turning to Santophen 1 because they find a ready market for shampoos that *purify* as well as clean and which are *harmless to human beings and pets.*

Here is why formulators choose *Santophen 1:*

Santophen 1 reduces bacteria count drastically. In one instance a rug cleaner containing Santophen 1 lowered the bacteria count in carpet from 8,000,000 per square yard to 16 per square yard.

Santophen 1 is compatible with commonly used soaps and synthetic detergents.

When properly formulated, Santophen 1 retains its bactericidal activity in commercial cleaners.

Santophen 1 controls mildew.

Santophen 1 is safe and convenient to handle, (a) formulated, (b) by itself.

Give your rug shampoo *extra* qualities and *added* sales appeal with low-cost Santophen 1. For information, mail the coupon or contact the nearest Monsanto Sales Office. MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1778-K South Second Street, St. Louis 4, Missouri.

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Hy-O-Lan contains new, faster cleaning ingredients — richer emulsifying properties for more thorough cleaning action.

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Hy-O-Lan contains lanolin. Has a healing action on nicks and bruises. No more "soap raw" hands and wrists.

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Color Gardner 1933	2-4
Color Gardner 1933—After Heat Test to 500° F	4-7
Unsaponifiable %	0.3-1.5
Saponification Value	198-202
Acid Value	197-201
Iodine Value	125-135

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- √ 1. Unmatched quality and uniformity levels.
- √ 2. Made by special techniques in special equipment.
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- √ 4. Heat-Tested, light in color.
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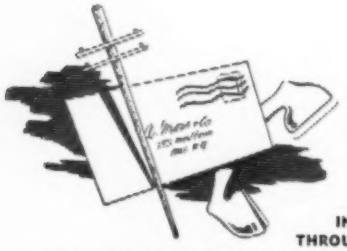

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We've always said it. We've always believed it. And we've made the wax that *proves* it!

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LAB Wax is listed by Underwriters' Laboratories, Inc. as an anti-slip floor treatment material.

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The moment you spread LAB on a prospect's floor, you're order-bound. For LAB produces a positively superior sheen . . . a lustre that sells itself on sight! And LAB's Lustre is *consistent*. It does not run, streak, splotch . . . thanks to LAB's self-leveling property, that minimizes the results of the most inexpert use.

As for safety . . . a glance to the left gives you the answer.

Sell lustre and safety. Sell LAB Wax . . . under your own label, competitively priced for generous profit.

SELF-POLISHING lab WAX

Chemical Service of Baltimore

HOWARD AND WEST STREETS, BALTIMORE 30, MARYLAND

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Milking machines, pasteurizers, coolers, cream separators and all the other finely-made equipment on a dairy farm must be kept "hospital clean." Or up goes the "bacteria count"... and down goes the milk check from the receiving station. Read how NACCONOL can help!

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with mixtures based on Nacconol*

AMERICA'S LEADING SYNTHETIC DETERGENT

Pound for pound, dollar for dollar, NACCONOL is the standard by which all new synthetic detergent "discoveries" are evaluated, because

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***Nacconol* is the oldest low priced, mass produced synthetic detergent. More Nacconol has been used for more years than any other synthetic!**

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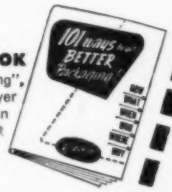

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the FINEST...
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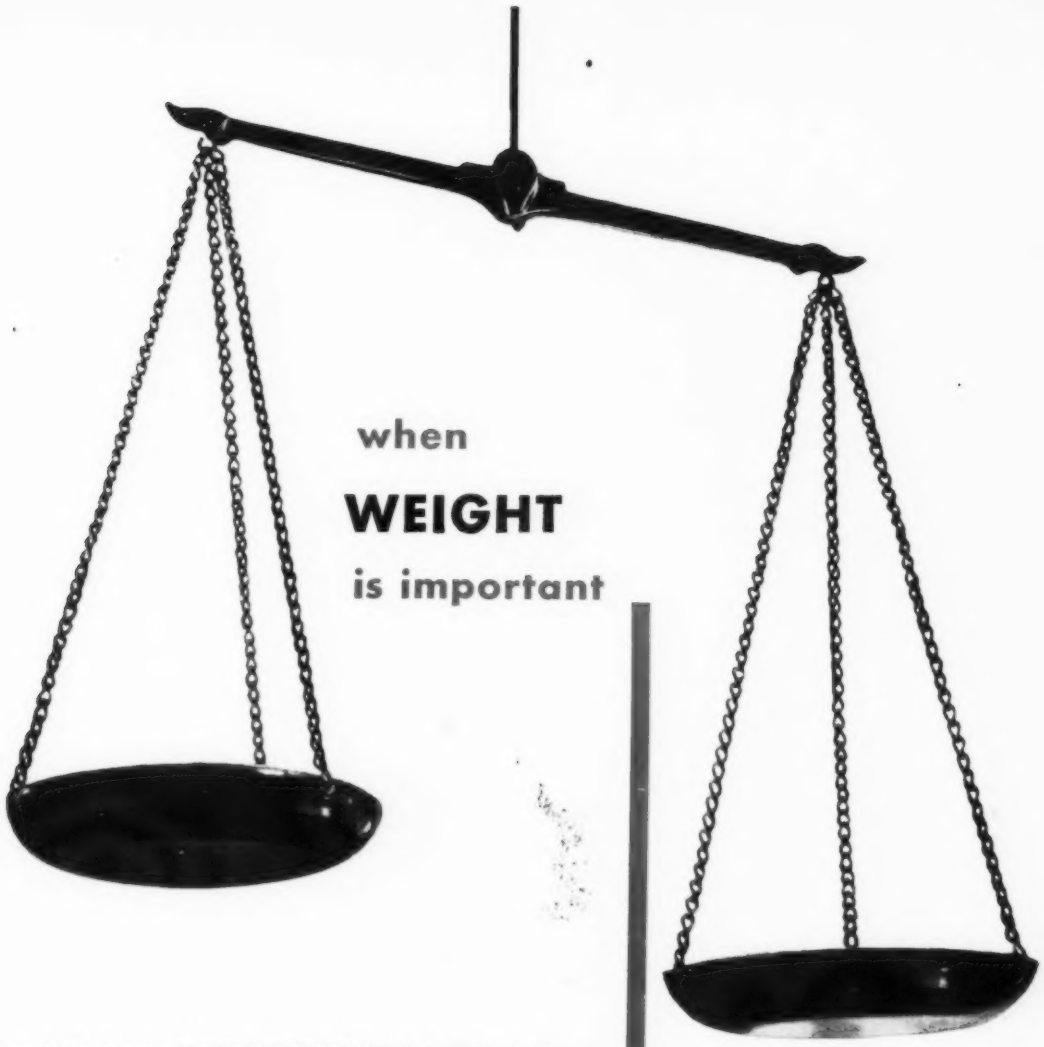

when

WEIGHT

is important

Try the new high density ULTRAWET SK bead. Another tailor-made Atlantic detergent developed especially for the compounder.

Now you can have the advantages of a bead in dry mixing detergents without materially affecting the weight of the product you normally pack in your container. With high density ULTRAWET SK you have a product which is free-flowing even in humid weather . . . easier and more uniform in mixing . . . lighter in color with improved appearance in your finished product.

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These are just two of the Atlantic ULTRAWETS—a family of alkyl aryl sulfonates tailor-made for particular jobs. We'll be glad to send you a brochure which will give you the facts about the whole ULTRAWET family. The Atlantic Refining Company, Chemical Products Section, 260 S. Broad St., Philadelphia 1, Pa.

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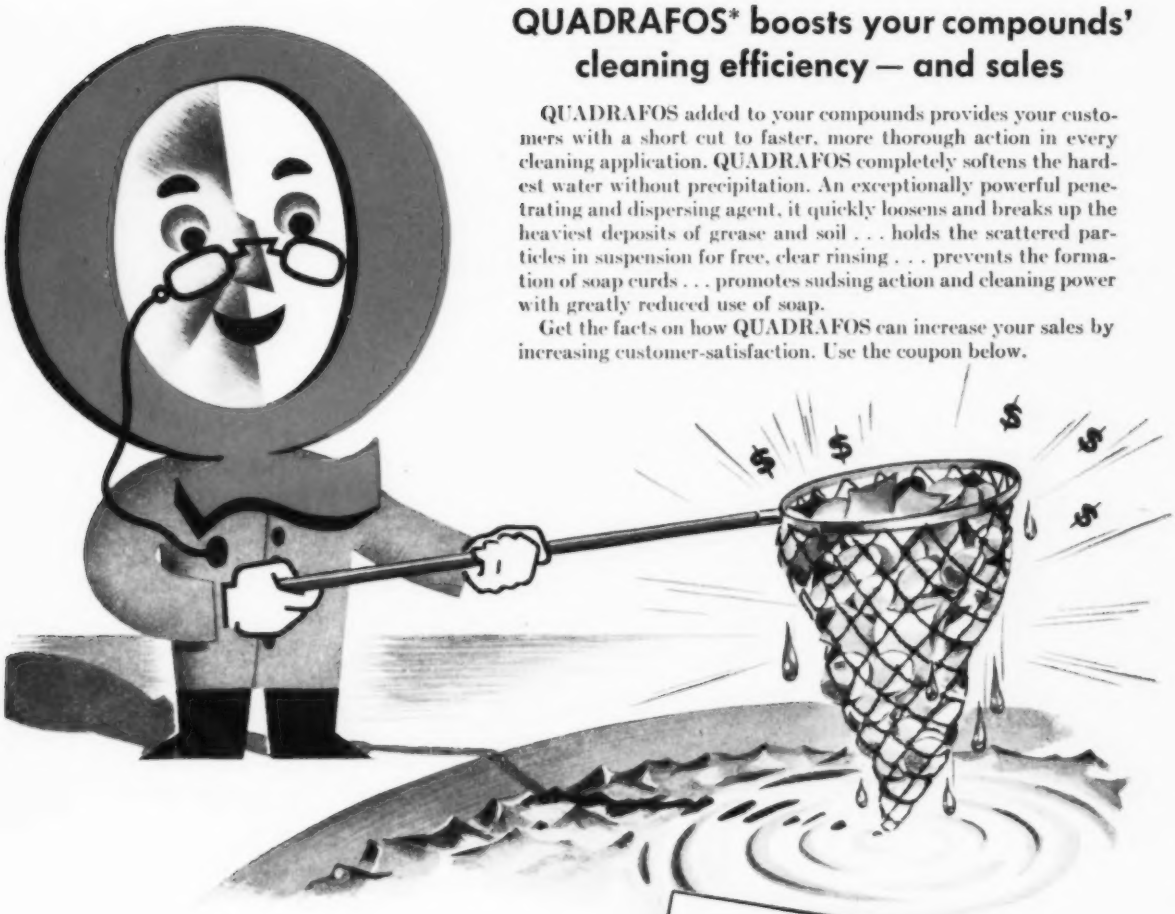
QUADRAFOS added to your compounds provides your customers with a short cut to faster, more thorough action in every cleaning application. QUADRAFOS completely softens the hardest water without precipitation. An exceptionally powerful penetrating and dispersing agent, it quickly loosens and breaks up the heaviest deposits of grease and soil . . . holds the scattered particles in suspension for free, clear rinsing . . . prevents the formation of soap curds . . . promotes sudsing action and cleaning power with greatly reduced use of soap.

Get the facts on how QUADRAFOS can increase your sales by increasing customer-satisfaction. Use the coupon below.



softens water without precipitation . . . deflocculates

. . . redissolves precipitates . . . promotes free rinsing

*Reg. U. S. Pat. Off.

ONLY WITH
QUADRAFOS
CAN WATER
DO SO MUCH, SO WELL

RUMFORD CHEMICAL WORKS
Technical Service Department
19 Newman Avenue
Rumford 16, Rhode Island

Please send me further information about QUADRAFOS. I'm particularly interested in:

- ☐ Sequestration of calcium, magnesium and other minerals
- ☐ Prevention of alkali precipitates
- ☐ Regeneration of lime soap
- ☐ Dispersion of soil
- ☐ Free rinsing
- ☐ Better emulsification of fats and oils
- ☐ .....

Name.....

Firm.....

Address.....

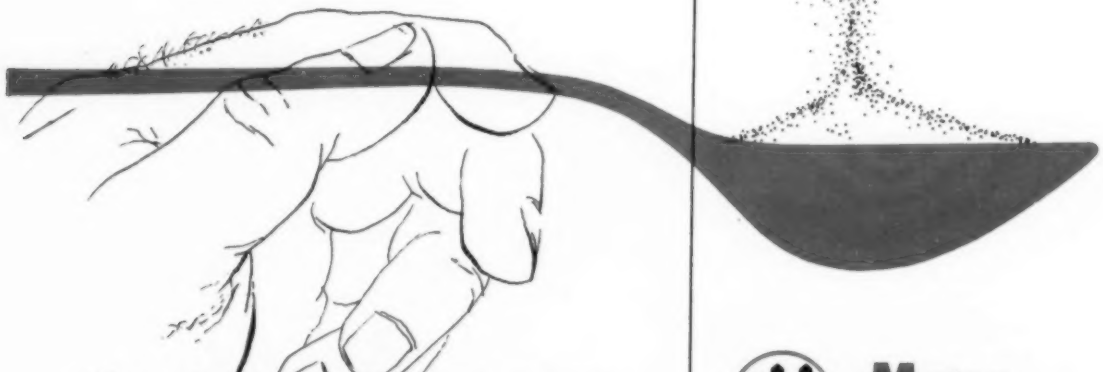
.....

City.....*Zone*.....*State*.....

tonic... *for tired brands*

Here are detergency values
that makers of cleaning compounds
use to establish leaders.
They are obtainable conveniently *and* at low
cost from Metso. Check over these
ten advantages that will help you to boost
Profit and Quality.

1. Uniform cleaning strength
maintained at high degree of activity.
2. Soluble silica component
protects sensitive surfaces.
3. Fast wetting action.
4. High deflocculating power.
5. Prevention of re-deposition of dirt.
6. Attractive white, free-flowing granules.
7. Uniform high quality.
8. Mix readily with soaps, phosphates,
synthetic detergents and other alkalis.
9. Conveniently packaged in 100 lb. bags
and re-usable drums.
10. Economical.



We are holding for your request a copy of Bulletin 17-2 which describes the Metso Silicated Detergents and other PQ Dry Soluble Silicates which are of interest to formulators of cleaning compounds.

Metso Detergents

PHILADELPHIA QUARTZ COMPANY
1152 Public Ledger Building, Philadelphia 6, Pa.

blue says "Buy Me"

PACK
TO
ATTRACT
IN

Maryland Blue

Does your package do only half its job? Does it act *only* as a container? Or does it do a *complete* job as half container . . . half merchandiser?

Maryland Blue Glass excels in both these vital functions. Many famous *name brands* have proved through years of use that Blue acts as a powerful advertising, merchandising and selling tool. Blue gives your product an air of distinction and quality. Blue is easier to see . . . easier to remember. Blue displays your product in a way that says, "*Buy Me!*" So follow the lead of many famous brands . . . pack to attract in Maryland Blue. Write for details and samples.

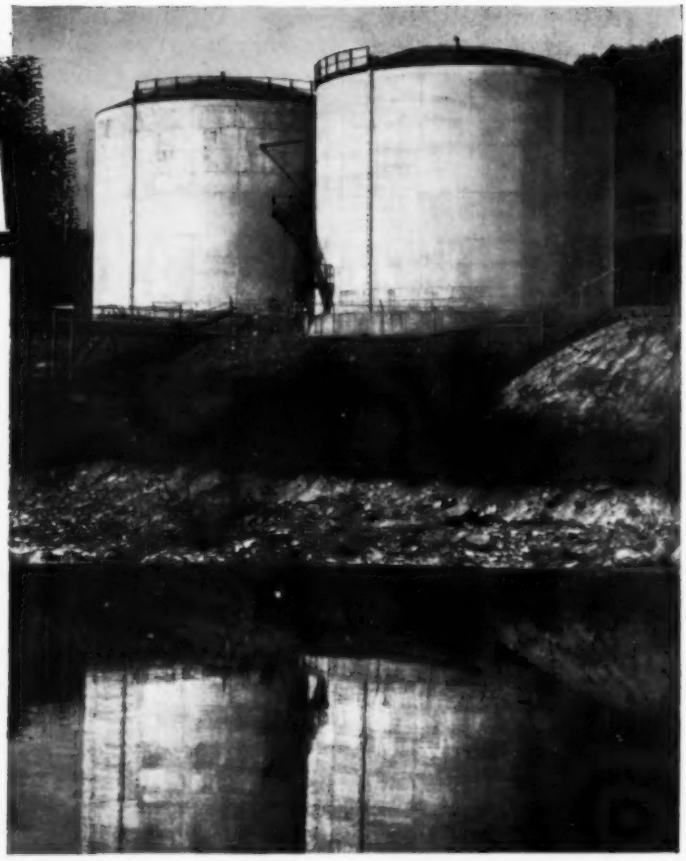
ALSO AVAILABLE IN CLEAR GLASS

MARYLAND GLASS CORPORATION | **BALTIMORE 30, MARYLAND**

specify...

Mathieson Caustic Soda

and you get **all 3 benefits**



Specially constructed liquid caustic storage tanks at Mathieson's Saltville, Virginia plant.

CAPACITY

Mathieson, with its three large plants using both the electrolytic and ammonia-soda processes, is one of the country's largest producers of caustic soda.

DIVERSITY

Mathieson Caustic Soda is available in 50% and 73% liquid form in regular and rayon grades of purity; also in solid and flake form. With Mathieson as your source of supply you are sure of getting any grade you need.

FLEXIBILITY

Mathieson Caustic Soda is produced at three points strategically located to serve economically the principal industrial areas of the country. Write today for our latest handbook on Mathieson Caustic Soda. Mathieson Chemical Corporation, Mathieson Building, Baltimore 3, Maryland.

Mathieson CHEMICALS

0453

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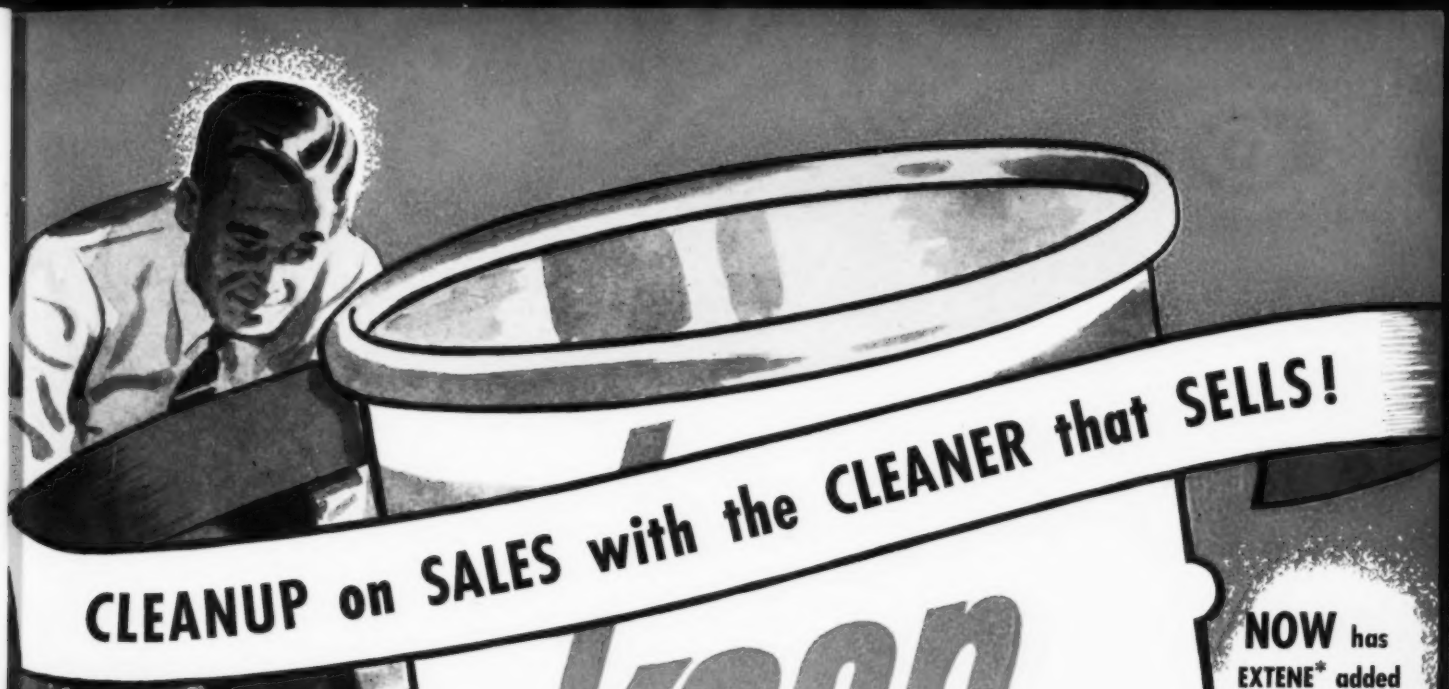

CLEANUP on SALES with the CLEANER that SELLS!

kcep

Pronounced "KEP"

CONCENTRATE
Neutral Cleaner

NOW has EXTENE* added for amazing scum-lifting action.

Fastest moving concentrate in our entire quality line. Jobbers report that orders repeat. Phones ring fast when users see how much easier and better KCEP cleans and conditions. KCEP Concentrate is a neutral cleaner that combines the emulsifying properties of soap with the wetting properties of synthetics. It gives safe cleaning that is *more than surface cleaning*. KCEP actually brings floors back to life . . . removes soap-scum buildup that hides floor brightness . . . gets through to the natural color so that floors regain their rich appearance. KCEP is highly concentrated, so it's extra economical.

* **EXTENE gives the extra cleaning action . . . makes it easy to remove surface-dulling film and stubborn, clinging scum that just won't give up to ordinary floor cleaners.**

PPC SINCE 1918

☆ **ONE OF THE BEST CLEANERS KNOWN** for asphalt and rubber tile, linoleum and other soft floors.

SAFE on any surface where water is not harmful.

EXTRA HEAVY DEMAND in hard-water areas . . . KCEP is effective in hot or cold, hard or soft water.

ECONOMICAL . . . highly concentrated so a little goes a long way.

REMOVES WAX when used in recommended concentration. Won't harm the floor.

FREE RINSING. Just suds the floor . . . then a single rinse is usually sufficient. (Prevents soap buildup that makes dull floors.)

LEAVES CLEAN FRESH ODOR.

USE THIS COUPON FOR SPECIAL SAVING

Get 15-gallon drum at same price per gallon as 55-gal drum order.

Peck's PRODUCTS COMPANY

610 E. CLARENCE, ST. LOUIS 15, MO.

PECK'S PRODUCTS COMPANY
610 E. CLARENCE,
ST. LOUIS 15, MO.

☐ Please send descriptive folder on KCEP

☐ Ship introductory 15-gallon drum at same price per gallon as 55-gal. drum order.

Name_____

Firm_____

Street_____

City & Zone_____ State_____

More than **colors and canvas** are required to create a masterpiece . . . It takes the hand, the skill, the creative genius of the true artist. So, too, in the perfuming of any product . . . Oils and chemicals will produce an odor . . . but a skilled perfume chemist will create a thing of beauty, artfully designed and ably fitted to the particular job at hand.

Tell us your problem and let us design a *selling* scent.

MANUFACTURERS AND CREATORS OF THE FINEST PERFUME MATERIALS

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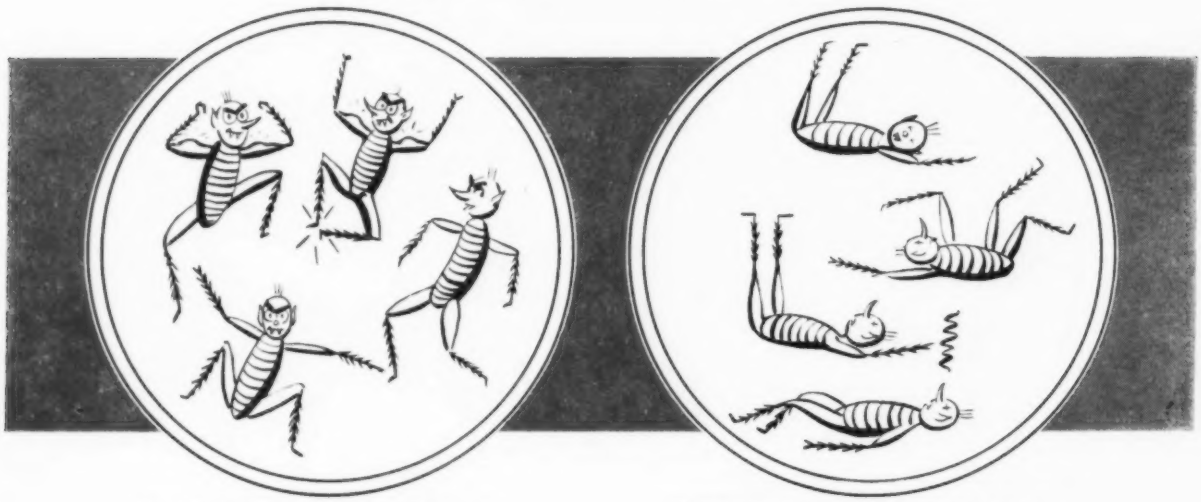
NEW YORK 19, N. Y.

ANOTHER *BUCKEYE* FIRST!

GERMELIM

A Concentrated Soap and Cleaner With the Amazing Phenol Coefficient of 3.5!



Most floor surfaces harbor an amazing number of both harmful and harmless bacteria invisible to the naked eye—presenting health hazards which should never be overlooked.

GERMELIM, in a single operation, cleans, deodorizes and destroys a large percentage of these dangerous germs—leaving floors spotlessly clean and with an extremely low bacteria count.

Clean, disinfect and deodorize floors in a single, thorough operation with Buckeye GERMELIM — latest development of the Davies-Young laboratories. GERMELIM is a concentrated soap and cleaner combination with the amazing phenol co-efficient of 3.5. It cleans floors quickly and efficiently—rinses freely. Diluted with water in a 30 to 1 solution, it *destroys* dangerous floor bacteria on contact leaving a clean, lasting odor.

GERMELIM is as easy to use as ordinary floor cleaners, and is equally effective on floor surfaces of every type. You simply prepare a 30 to 1 scrubbing solution with GERMELIM and apply. When savings in time, money and effort are important . . . when low bacteria count is desirable . . . clean with GERMELIM. A free test sample with complete instructions for use is yours for the asking. Use the coupon below.

Another Great Product of
The Davies-Young Soap Company
Dayton 1, Ohio

AVAILABLE IN 55, 30, 15, 5 AND 1 GALLON CONTAINERS

THE DAVIES-YOUNG SOAP COMPANY SSC-1050
P.O. Box 995, Dayton 1, Ohio

Please send free sample of GERMELIM and full instructions for its use.

NAME .....

ADDRESS .....

CITY ..... STATE .....

Say you saw it in SOAP!

"and soon there'll be three"
Third Electric Furnace Unit
For Pocatello, Idaho Plant
To Provide An Ever Increasing
Supply of Westvaco Phosphates

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CAUSTIC POTASH
Liquid 45-50%, Flake and Solid 88-92%
CAUSTIC SODA
Liquid 50% Standard and Rayon Grades
Liquid 70-73% Std. Grade, Flake and Solid
NATURAL SODA ASH

PHOSPHATES

ACID SODIUM PYROPHOSPHATE
DISODIUM PHOSPHATE
MONOSODIUM PHOSPHATE
SODIUM TRIPOLYPHOSPHATE
TETRAPOTASSIUM PYROPHOSPHATE
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TETRASODIUM
PYROPHOSPHATE CRYSTALS
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BLANC FIXE (Barium Sulphate)
CARBON BISULFIDE
CARBON TETRACHLORIDE
FIRE EXTINGUISHER FLUID
HYDROGEN PEROXIDE
MAGNESIUM CHLORIDE
SODIUM SULFIDE

1948—1949—1950—in each of three succeeding years construction of a new electric furnace and supplemental facilities has been started at our Pocatello, Idaho plant.

America's industrial and household consumption of phosphates in general and Westvaco phosphates in particular seems to grow as fast as new facilities can be built. Our modernized phosphate processing plant at Carteret, N. J. and our new facilities at Newark, Calif. will soon be supplemented by another new processing plant at Lawrence, Kansas.

With a nationwide network of plants and a complete line of alkalies, phosphates and mixtures, we will welcome an opportunity to discuss the probability of serving your needs more effectively or economically. Your inquiry will receive prompt, courteous attention.

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CHEMICALS

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★DEPENDABLE SOURCE FOR BOTH ALKALIES AND PHOSPHATES.

Lavender

The Scent with Tradition

LAVENETTE

For generations the scent of lavender has been loved for its fresh delicacy. Now you can use it inexpensively and authentically in all of your products thanks to the newest creation of our perfume laboratories—LAVENETTE

LAVENETTE has many uses—in soap, shampoos, bath oils, bath salts, brilliantine, sachet, shave lotion—it has tremendous sales appeal for both men and women.

LAVENETTE is especially interesting for medium-priced lines because of its low cost . . . . . **2.85 per pound**

We'll be glad to send you free working samples for your own products. Just write to:

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Atlanta • Chicago • Dallas • Memphis • Pittsburgh • San Francisco • Los Angeles

WANTED:

PERPLEXING DETERGENT PROBLEMS

...to be solved by

ULTRA QUALITY PLUS DETERGENTS

Flake...Powder...Spray-dried Beads...Liquid...Paste...Slurry...

What is your detergent problem? Is it one of pricing...meeting and outmatching competition? Are you searching for the particular detergent that best serves *your* purpose? Do you require special formulations?

ULTRA's modern plant and staff of specialists are geared to handle unusual problems.

For example, a national organization wished to gain consumer volume on their household detergent specialty. ULTRA specialists provided new sales features by developing a detergent formulation that did not lump or cake . . . met an exact specific gravity . . . had controlled wetting time . . . was odorless and uniform in appearance.

Annual sales increased from 120,000 pounds to over a million within two years.

Whatever *your* detergent problems, perhaps we can solve them with the extra advantages of ULTRA DETERGENTS. Why not write or phone today?

SULFRAMIN* AB-40 FLAKES
SULFRAMIN* AB-40 POWDER
SULFRAMIN* E LIQUID
SULFRAMIN* SPRAY BEADS
SULFRAMIN* AB CONCENTRATE FLAKES
SULFRAMIN* AB CONCENTRATE POWDER
SULFRAMIN* KE LIQUID
SULFRAMIN* AB SLURRY

*TRADEMARK REG. U.S. PAT. OFF.

ULTRA CHEMICAL WORKS, INC.

PATERSON, N. J. • LOS ANGELES, CALIF. • JOLIET, ILL.

ULTRA Chemical WORKS

Get a good grip on sales with easy-to-grip Duraglas containers!

PUT HE-MAN HANDINESS IN YOUR BATHROOM PRODUCTS

Pick one of the 1400 Duraglas containers "functioneered" for good looks and good grip

When you put your "he-man" product in a good-looking container that's easy to use, you have a combination that's strong for sales!

You get this selling combination in any one of more than 1400 functioneered Duraglas bottles. They're made to your customers' preferences, yet meet the practical needs of your filling-line. Easily individualized by distinctive closure and label treatment, they are also low in cost.

If you should prefer a custom-made container, Duraglas Center specialists are ready to create a sales-appealing design, produce it with the most advanced technical skill. It will have the strength, toughness and durability that mark *all* Duraglas containers.

For everything from bottles to closures to shipping cartons, call your local Owens-Illinois office.

Duraglas Bottles are Protectors of Quality

TRADE MARK REG. U.S. PAT. OFF.

OWENS-ILLINOIS GLASS COMPANY • TOLEDO 1, OHIO • BRANCHES IN PRINCIPAL CITIES

Methocel:

the Indispensable Film Former

Do you need better film properties? Try the *new* Methocel (Dow Methylcellulose), *powdered*. Methocel, in the new powdered form, is easier to handle in process and can now be dry-mixed with other ingredients or added as a water solution.

Methocel, a synthetic gum, has outstanding qualities that are advantageous for liquid soaps. It is a useful film former and thickener in the manufacture of wax polishes, paint removers and protective hand creams. It is also an excellent shampoo thickener, suds builder for detergents and it can be used to extend liquid soap.

Try the *new* Methocel *powdered*, easy and economical to use. Send for your free experimental sample plus valuable information on the use of Methocel in the manufacture of soap. Just fill out the coupon below.

THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

THE new *methocel*

DID YOU GET YOUR SAMPLE?

The Dow Chemical Company
Dept. ME-943A, Midland, Michigan

Please send free sample of METHOCEL, for use in_____
Check viscosity desired: 15, 25, 100, 400, 1500, 4000 cps.

Name and Title_____

Firm_____

Address_____

City_____ State_____

DOW CHEMICALS
INDISPENSABLE TO INDUSTRY AND AGRICULTURE

For better detergents, cleaners and dishwashing compounds SPECIFY...

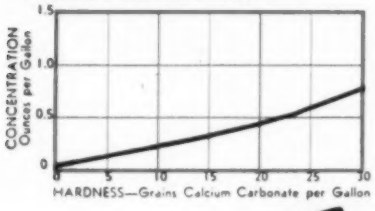
BLOCKSON SODIUM POLYPHOS*

(Sodium Hexametaphosphate)
(Sodium Tetraphosphate)

★ Write for a test sample of Sodium Polyphos. You'll see why it makes clothes so much whiter and cleaner, adds so much extra sparkle to china and silver—and why so many compounders and manufacturers now specify this stable, free-rinsing suds-booster and soap-saver for their leading detergents.

EMPIRICAL FORMULA: $Na_{12}P_{10}O_{31}$
COMPOSITION: 1.2 Na_2O: 1 P_2O_5
STRENGTH: P_2O_5 63.5% pH of 1% solution is 7.2
SOLUBILITY: 150 parts in 100 parts of water at 75° F.

Sequestration and Water Softening Capacity
BLOCKSON SODIUM POLYPHOS



FOR FURTHER DATA AND SAMPLE MAIL COUPON

WATER SOFTENING—SEQUESTRATION

Precipitation of calcium and magnesium salts, which normally occurs with increased temperature or alkalinity, is inhibited when minute quantities of Sodium Polyphos are added to hard water. Larger additions prevent precipitation by *forming inert complexes** with the hardness elements. Precipitates already formed will re-dissolve. These complexes won't react with soap added to cleaning bath or formed by saponification of greases and oils by alkaline detergents. Sticky, fabric-enmeshing and equipment-clogging soap curds are avoided. THUS SODIUM POLYPHOS IS A VALUABLE ADJUNCT TO EVERY DETERGENT OPERATION.

*Also forms inert complexes with metallic ions of iron, copper, nickel, manganese and zinc.

DISPERSION

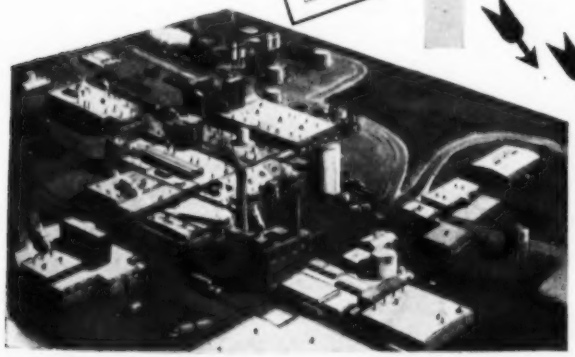
— Sodium Polyphos exhibits to a remarkable degree the property of increasing dispersion of finely divided solids in a liquid medium. Typical applications include: dispersion of clay for coating papers, reducing viscosity of muds for drilling oil wells, water suspension of organic pigments. These, and the listing below, may suggest experimental application to your own particular problem.

OTHER KNOWN USES

— Industrial and municipal water treatment: for preventing scale formation, iron precipitation, and for corrosion control. Boiler compounds, dishwashing and detergent compounds, processing and dyeing of textiles, leather tanning, photographic film developing, flotation and desliming of minerals.

OTHER BLOCKSON CHEMICALS

- Sodium Tripolyphosphate Anhydrous
- Tetrasodium Pyrophosphate, Anhydrous
- Sodium Silicofluoride • Sodium Fluoride
- Trisodium Phosphate, Crystalline
- Chlorinated Trisodium Phosphate
- Trisodium Phosphate, Monohydrate
- Disodium Phosphate, Anhydrous
- Disodium Phosphate, Crystalline
- Monosodium Phosphate, Anhydrous
- Monosodium Phosphate, Monohydrate
- Sodium Acid Pyrophosphate
- Light Alumina Hydrate
- Gloss White
- Sulfuric Acid



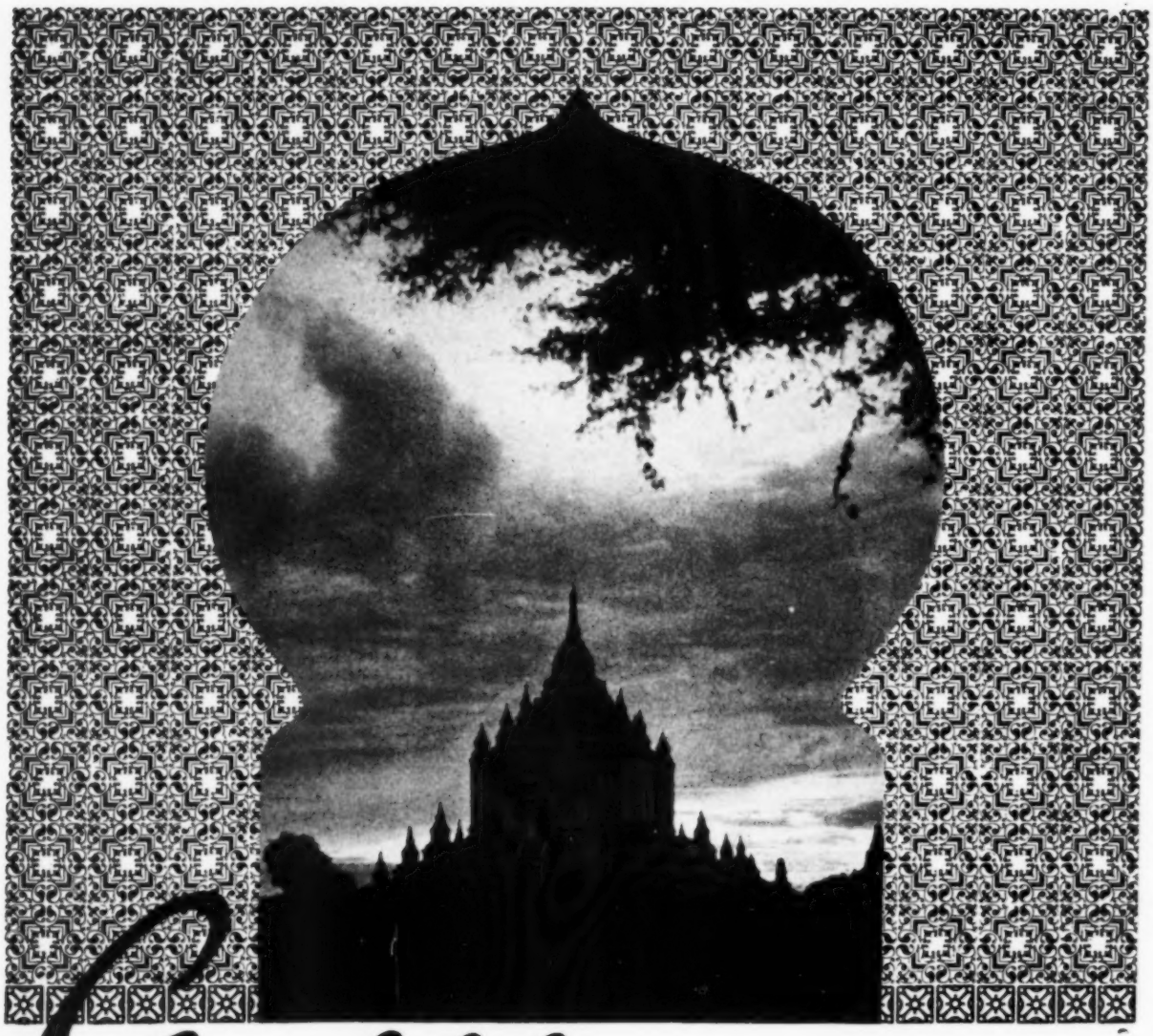
On this 200-acre site, an hour from the nation's railway hub, the vast BLOCKSON organization is coordinated into a closely knit group under intimate executive supervision for prompt service to American industry, large and small.

BLOCKSON CHEMICALS

Sodium Polyphos is a brand name

BLOCKSON CHEMICAL CO., Joliet, Illinois
Send bulletin on Blockson Sodium Polyphos
Include sample: ☐ Ground ☐ Lump Walnut ☐ Lump Pea

Name ..... Title .....
Company ..... Street .....
City ..... Zone ..... State .....



Shalflex

The exotic bouquet of the Orient—imparting a rare, lasting fragrance of the Far East. Ideal for fine soaps, sachets and soap products.

Write today on your business letterhead for a generous free sample.

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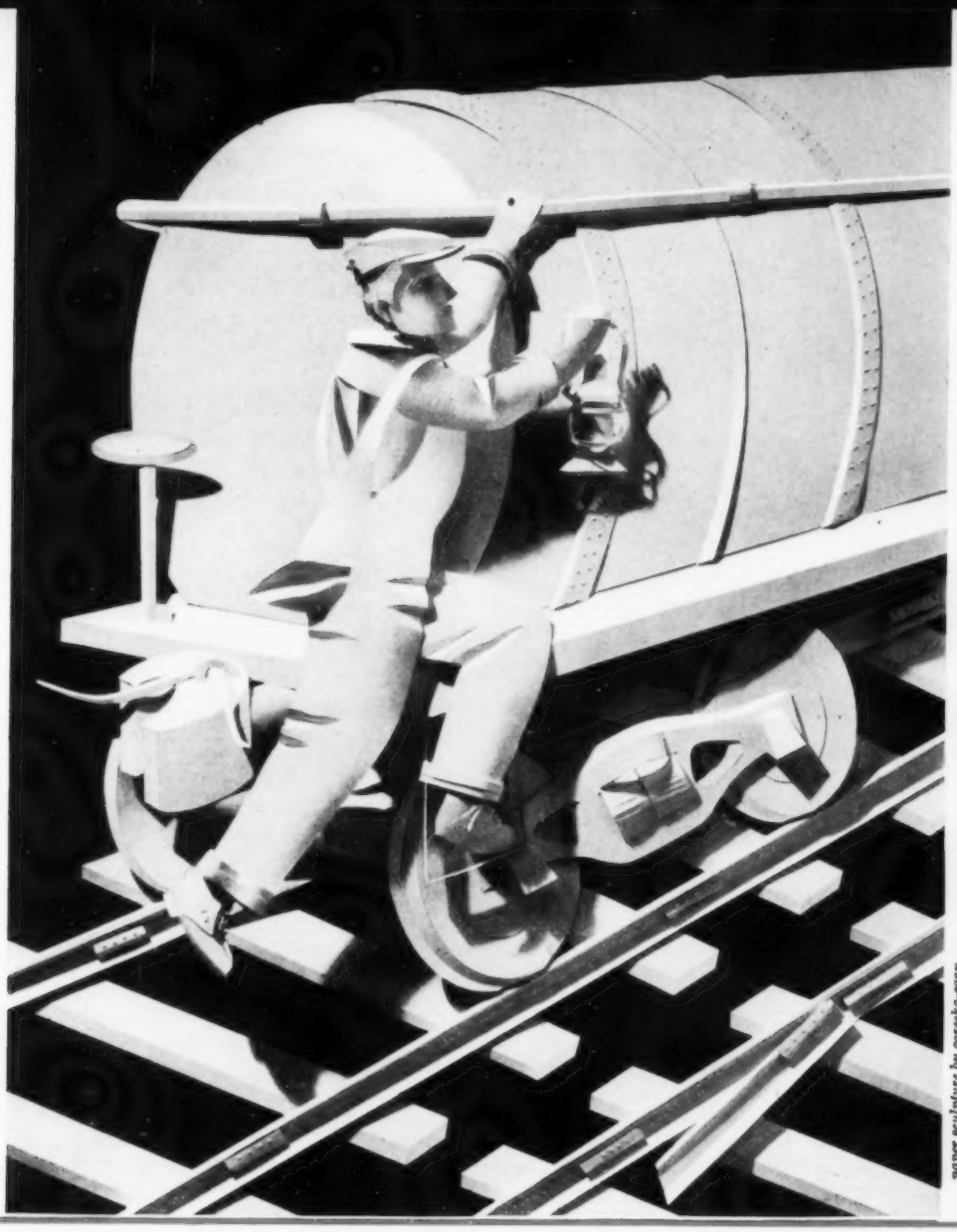
Florasynth Labs. (Canada) Ltd.—Montreal • Toronto • Vancouver • Winnipeg Florasynth Laboratories de Mexico S. A.—Mexico City



paper sculpture by gorecka-ayan

"let 'er roll"

Whether they "roll" in tank cars,

or any other type of container, Niagara chemicals

are unsurpassed for quality.

EBG* Liquid Chlorine
NIALK* Caustic Potash
NIALK Carbonate of Potash
NIALK Paradichlorobenzene
NIALK Caustic Soda
NIALK TRICHLORethylene
NIAGATHAL*
(Tetrachloro Phthalic Anhydride)

*Trade-mark

NIAGARA ALKALI COMPANY

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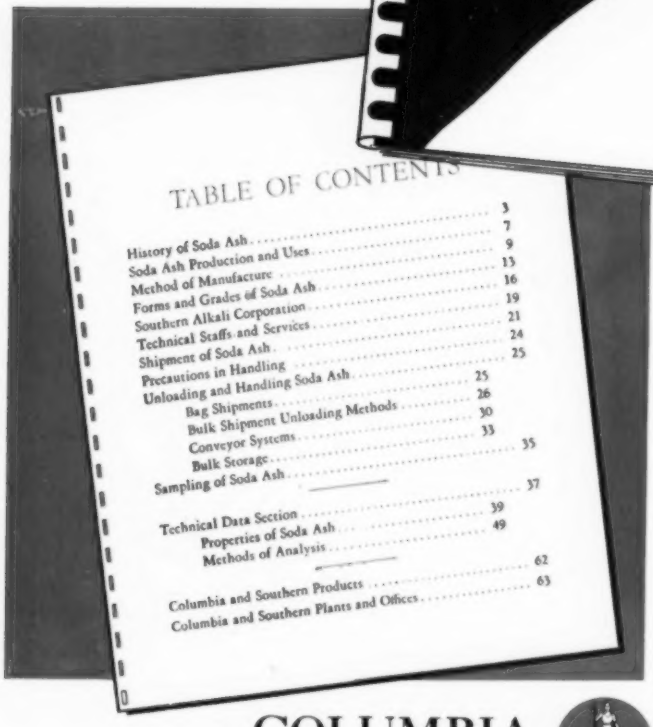
Just off the press—

The latest handbook on SODA ASH — and the most complete ever published!

. . . . By the Technical Staffs of Pittsburgh Plate Glass Company, Columbia Chemical Division; and Southern Alkali Corporation.



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This completely new, authoritative 64-page illustrated manual is now available without charge to Soda Ash users throughout industry and to others whose work involves Soda Ash.

Write on company stationery to the Pittsburgh Plate Glass Company, Columbia Chemical Division, Fifth Avenue at Bellefield, Pittsburgh 13, Pa.

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PITTSBURGH PLATE GLASS COMPANY

PINE OIL

SMELLS CLEAN...CLEANS CLEAN

Mechanics who have used pine oil soaps say there's nothing like them for removing grease and grime. They naturally associate pine oil with cleanliness. It not only smells clean, but quickly penetrates and removes the most stubborn dirt from pores without irritation.

Hercules® Pine Oils mix easily with other soap ingredients, do not stain, are safe to handle, and low in cost. It will pay you to continue to rely on the economy and sales appeal of these natural aromatic detergents.

HERCULES POWDER COMPANY
INCORPORATED
961 Market Street, Wilmington, Delaware

NC50-5

WHY PAY INFLATED PRICES FOR ESSENTIAL OILS?

change to . . .

JAVONELLA

PERFECT FOR PERFUMING...

- LAUNDRY SOAPS
- WASHING POWDERS
- LIQUID CLEANSERS
- POLISHES, ETC.

NOW, MORE THAN EVER, JAVONELLA OFFERS THESE IMPORTANT ADVANTAGES!

- It's a manufactured article . . . free from the price fluctuations of natural essential oils such as Citronella, Sassafras, etc.
- Its high quality never varies, enabling you to manufacture uniformly dependable products.
- Always lower in cost than the natural oils, particularly now with citronella prices on the rise, its use results in production economies and higher profits without lowering quality standards.

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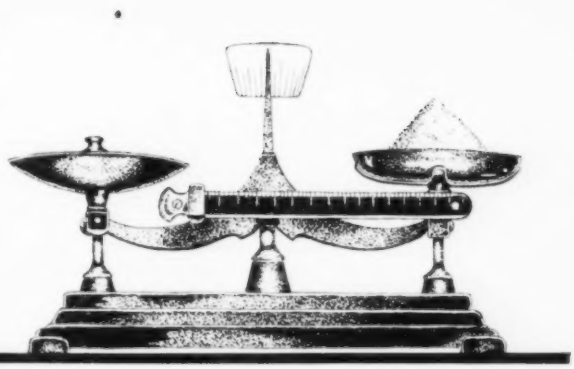
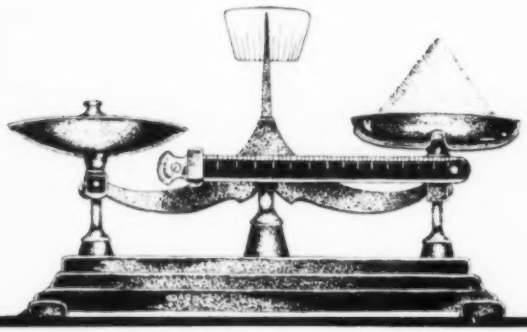
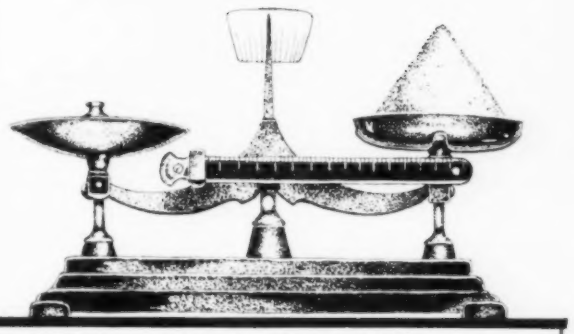
STOCKS CARRIED IN PRINCIPAL CITIES

solve your bulking problem with SANTOMERSE No. 1







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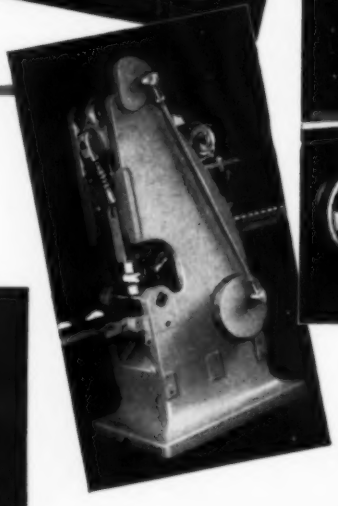

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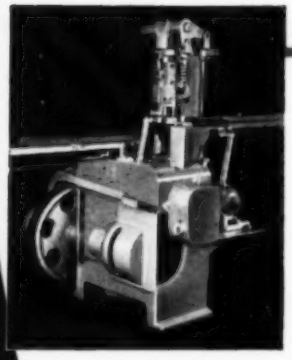

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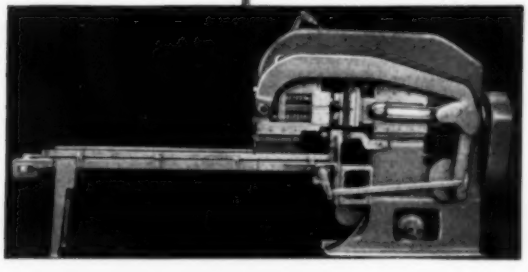

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AS THE EDITOR SEES IT

OVER the years, American women on the whole supposedly have preferred to wash their hair with soap shampoos. That these have had disadvantages which have laid them open to criticism, every manufacturer and marketer in the field has known. Just as hard water was the bugaboo for laundry soaps, it was the same for soap shampoos. It also was the door-opener some years back for the first of the synthetic detergent shampoos which over a relatively short period swept to the top of the market in sales. Hard water made it easy to damn soap for its sheen-dulling scum on milady's tresses, and to switch her to a synthetic product. Other synthetics followed the first and eventually the proportion of the market enjoyed by these newcomers was greater than that for soap shampoos.

Lately, although we have no accurate figures to substantiate the statement outside of a few guesses by shampoo marketers, the older soap type has been swinging back into popularity. This, we hear, is due to two things: first, the shortcomings of some of the synthetics, particularly the effect of drying out the scalp; and second, the end of the hard water problem for liquid soap shampoos. They tell us that sequestering agents have licked the hard water problem, and with this problem licked, soap is a better all-around shampoo and more to the liking of the average woman than a synthetic.

One leading manufacturer whose main product is a coconut oil shampoo, estimated that the soaps had come back to the point where sixty per cent of the market today is liquid soap and forty per cent is represented by synthetics. And of this sixty per cent for soap, he told us, over eighty per cent is coconut oil potash soap averaging around twenty per cent anhydrous soap.

Where do we go from here in the shampoo market? With the advertising pressure on some of the synthetics, the chances are that they again may reverse the trend in demand. All of which makes interesting speculation, doubly interesting as long as the sale of shampoos as a class continues at a high level.

RESUMPTION of alkali production late last month at the Solvay plants after a strike lasting over 100 days was welcome news to harassed consumers of soda ash, caustic soda, chlorine, and other basic chemicals. For over three months, while alkali demand was at its height, the world's largest producer was shut down. The heroic efforts of other producers to fill the gap could not prevent a series of acute shortages which had a crippling effect on alkali and chlorine consumers at a time when the demand for their finished goods also had taken on the proportions of a deluge. Industry after industry found its output running behind because of the shortage of caustic, ash, and chlorine, not to mention innumerable chlorine derivatives.

Soap manufacture, naturally, did not escape the effects of the alkali shortage. Coupled with the booming demand of the past few months, inability to produce soap fast enough forced the industry steadily behind on deliveries. As of October first, toilet soaps were reported to be about sixty days behind schedule while laundry and industrial soaps were more than ninety days behind. As in the days of the wartime shortages, manufacturers' salesmen have been spending their time coaxing customers to take less soap, something of a reversal of form from a year or so ago. And, it might be added, both the manufacturers and their salesmen have been collecting their share of abuse in the process.

That the full effects of the prolonged Solvay strike, particularly under present conditions of demand, will be felt for many months to come, is quite generally agreed. As things stand today, any opportunity to catch up on lost production does not appear on the horizon at this writing.

IF we would convince ourselves that soap manufacturers are rolling in money and are making profits faster than they can be spent, all we need do is go to Washington and discuss the subject with a few members of Congress. This opinion appears to be generally accepted among congressmen, housewives, and the public at large, due probably in the main part to misinterpretation of large soap company financial reports and to apparent elaborate expenditures for advertising. But recently, the Federal Trade Commission studied the profit figures for twenty-five leading soap and cleanser manufacturers and found them much smaller in 1949 than in 1940. In fact, the figures showed that on the average stockholder's investment, the gross return was as follows: 1940—17.5 per cent; 1947—22.9 per cent; 1948—18.2 per cent; 1949—6.6 per cent. And this was during a period of the highest profits in history for practically every American industry.

Maybe FTC figured that it would unearth a different set of figures when it delved into soap industry profits, possibly something to substantiate Washington old wives' tales of fabulous profits in soap making. We must admit that the 6.6 per cent figure for 1949 was quite a shock to us. After seeing some of the recent reports for automobile, steel, and other industries, this would appear to make out the soap industry as something of a piker in the matter of profits.

DID somebody get caught with a large quantity of high priced tallow? Could be, since in the scramble to grab all available tallow at any price the market shot up 3½ cents in a single day. Even at 13¾ cents a pound for the fancy grade, we understand none was available. The recent sudden slump in the market during which tallow and grease prices went off from a cent to one and one-quarter cents may find some reddened faces in the ranks of the soapers, particularly since further declines are in prospect as a result of the good news from Korea.

Fear of government controls, the possibility of war, and memories of tallow price performance in post-war days have brought about a situation that seems fantastic in view of adequate tallow supplies.

WILL most soaps of the future be germicidal? The increasing use of such germicidal ingredients as hexachlorophenel and other bactericides for both soda and potash soaps indicates the possibility of such a trend. Antiseptic soaps in various forms are available for medical use, particularly for pre-operative scrub-up, for food handlers and under more than a half dozen brands as deodorant soaps. How soon the incorporation of germicidal ingredients will become a must for all soaps could depend largely on the economics of the situation. At present most of the germicidal soaps are more costly than comparable toilet, bath and general purpose household soaps not containing an antiseptic ingredient.

But the sales possibilities of the germicidal type soap are so potent that they hardly can be overlooked. The idea of a soap that "kills germs," which was used as the title for an article on G-11 soaps, appearing in a recent issue of the *Readers' Digest*, has a psychological importance as well. It boils down to this: the person who has tried a germicidal soap establishes in his mind, at least, the idea that washing with this particular product removes dirt, kills germs and reduces their number upon continued use.

If a user switches back to any of the established brands, not claimed to be antiseptic, he may doubt their efficiency as complete cleaning agents. This state of mind might be exploited to advantage by the clever marketer in presenting to the consumer two similar cakes of soap, at approximately the same price, and asking if the customer prefers the one that will kill germs. Ideas with less sales appeal have been parlayed into handsome profits.

If the germicidal materials, suitable for incorporation in soaps, can be produced in quantity and at prices required to be used on a wide scale, the possibility of a continued expansion in this germicidal soap idea far beyond present limits is altogether likely.

Past president members of the board of governors of the A.O.C.S. conferring at the San Francisco meeting. Left to right: V. C. Mehlenbacher of Swift & Co., Chicago; C. P. Long of Procter & Gamble Co., Cincinnati; J. R. Mays, Barrow-Agee Labs., Memphis, and R. T. Milner, Northern Regional Research Laboratory, Peoria, Ill.

Oil Chemists' 24th Meeting

By John W. McCutcheon

RECENT developments in soaps and synthetic detergents, including the announcement of nonionic detergents in flake form were among the highlights of the 24th Fall Meeting of the American Oil Chemists' Society, held Sept. 26-29, at the Sir Francis Drake Hotel, San Francisco. Approximately 300 persons were registered for the meeting, which also drew 60 women guests. Dr. Ernest B. Kester of the Western Regional Research Laboratory, Albany, Calif., was general chairman for the meeting and Dr. Harold S. Olcott, also of the Western Regional Research Laboratory, was in charge of the program, which was composed of 46 technical papers. In addition, there were 16 supply and equipment exhibits.

The main social event of the meeting was the banquet and entertainment given on the evening of Sept. 27. Other social functions included, in addition to a special program for women attending the meeting, an informal tea and reception, Sept. 25, the day before the meeting opened officially, dinner at DiMaggio's restaurant, followed by a boat ride on San Francisco Bay, Sept. 26, attendance at the opera, "Lucia," Sept. 28 and an all-day bus trip to the Cargill Copra mill and Beringer Brothers winery or a two hour airplane sight-seeing trip over San Francisco.

The fat and oil analysis committee and the Society's Governing Board met on Sept. 25th, and the soap analysis committee met on the 26th.

The three days of technical sessions opened on Sept. 26, with the call to order by J. R. Mays, Jr. of Barrow-Agee Laboratories, Inc., Memphis, Tenn., A.O.C.S. president. He was followed by E. B. Kester convention chairman who introduced the first speaker, Karl Brandt of the Food Research Institute, Stanford University, who discussed the "World Economic Situation of Fats and Oils." The speaker indicated that fat and oil production presently is in balance with consumption. Total world production was put at 23 million tons by Mr. Brandt, of which about one-quarter enters into international trade. He also pointed out that the rise in consumption of synthetic detergents has reduced the amount of fat used for soaps, although more tallow than ever before is employed in the manufacture of soap.

Other papers of interest to soap and detergent producers given at the meeting included that on "A New Process for the Complete Solvent Rendering of Raw Tissue" by E. Levin of VioBin Corp., Monticello, Ill. In his paper the speaker pointed out that this process is applicable to tallow, utilizing the principle of azeotropic distillation to remove the water present at low temperatures. Lower costs for labor, power and steam than for the conventional dry rendering plant of equal size are claimed for the process. Various solvents may be used such as hexane which removes one pound of water for every seven pounds of solvent in a mixture boiling at

At the head table during the banquet: seated, E. B. and Mrs. Kester of Western Regional Research Laboratory, Albany, Calif., general chairman of the meeting; J. R. and Mrs. Mays; standing, Hugh and Mrs. De Bussieres and S. O. and Mrs. Sorenson of Archer-Daniels-Midland, Minneapolis.

79° C. This process may have future possibilities for the renderer.

In a paper "Unusual Applications of Surfactants in the Chemical Process Industry" by Daniel H. Terry, Antara Products, General Aniline and Film Corp., New York, the application of surfactants to unusual problems is discussed in (1) chemical processes, (2) metal processing and as (3) anti statics. Under metal processing the paper covers the use of surfactants in cleaning equipment to avoid traces of contaminants from interfering with the reaction. Wetting agents and detergents are useful for the purpose. When contaminants are metallic salts, sequestering agents such as the poly amino carboxylic acids are useful. In certain cases where the operation is one of crystallization, a few tenths of one per cent of an alkyl aryl sulfonate may so change the separation characteristics of an impurity that the product is greatly improved in purity. A saving of $30,000 per year was effected in an operation such as that described above, the speaker said. In other instances, the addition of a dispersant reduces local overheating. Aqueous chlorination and bromination reactions were mentioned as examples. As a filtering aid, wetting agents lower initial back pressure. In air conditioning equipment they help to coalesce the dirt. Sometimes it is desirable to break fine emulsions such as traces of oil in petroleum refining liquors. The oxylated amines and esters were mentioned for this purpose. When HCl is used to open oil wells clogged with lime, the use of surfactants in the acid, aids by permitting better and quicker contact.

(2) A second important field of surfactant use is in metal processing: cutting, grinding, pickling, etc. It was pointed out that surfactants cannot be used interchangeably for this purpose but must be selected with care according to their application and depending on their stability to heat, acid, metals, etc. In pickling baths, surfactants act as inhibitors and retard the acid action. In another case, as little as 0.005 per cent of nonionic in a wire descaling bath enabled all the scale to be removed. Without the nonionic, small amounts of scale remained where the wires were in contact. In another example the use of a similar amount of nonionic reduced rusting five times as long. Dross is lowered in steel galvanizing operations representing a saving in time and in loss due to the degrading of the metal. In degreasing operations a few per cent of surfactant added to the alkali may reduce the time of operation by as much as 30 per cent. Mixed agents such as the poly ethylene alkyl phenols and alkyl aryl sulfonates are useful to combine wetting and emulsification properties. In aluminum cleaning, the use of surfactants enables a less alkaline product to be used effectively. Tests on steel panels showed good cleaning with an 0.5 per cent sodium pyrophosphate and an 0.5 per cent nonionic in five to 15 seconds at 140° F. The presence of sodium alkyl sulfates in lubricants reduces pitting. Electroplating at higher pH values is possible and by using the organic sequestering agents hard water may be used in the baths.

The third phase discussed, anti statics, is becoming very important in the plastics field both to aid manufacture and to improve the finished product. Trade name products mentioned for use in these applications were,

PARTIAL ANALYSES OF TWO PURIFIED SAMPLES

	Sweetwater	*Soap Lye Crude*
Glycerol	96.8%	99.02
% Residue	0.0012	0.0010
% Ash	0.003	0.0004
% Chlorides (NaCl)	0.0001	0.00016
F. A. & Esters	0.09 CC.	0.08 CC.
Du Pont Test	Equal or Better	Equal or Better

"Dust Free," "Cleaner H145" and "Glim."

"Properties of Some Newly Developed Nonionic Detergents" by T. H. Vaughn, H. R. Suter, L. G. Lunsted, and M. G. Kramer, Wyandotte Chemicals Corp., Wyandotte, Mich., mentioned a new type of nonionic material consisting of ethylene oxide condensed with a new type hydrophobic material not hitherto used. The trade name "Pluronic," is given to the products and they are coded "L" for liquid, "F" for flake, etc., followed by two letters which show the ratio of hydrophobic to hydrophilic used. The products discussed were "Pluronics L44," "L62," "L64" and "F68." Unlike other nonionics, they are more soluble in hot than cold water, and the solid "L68" material may be flaked.

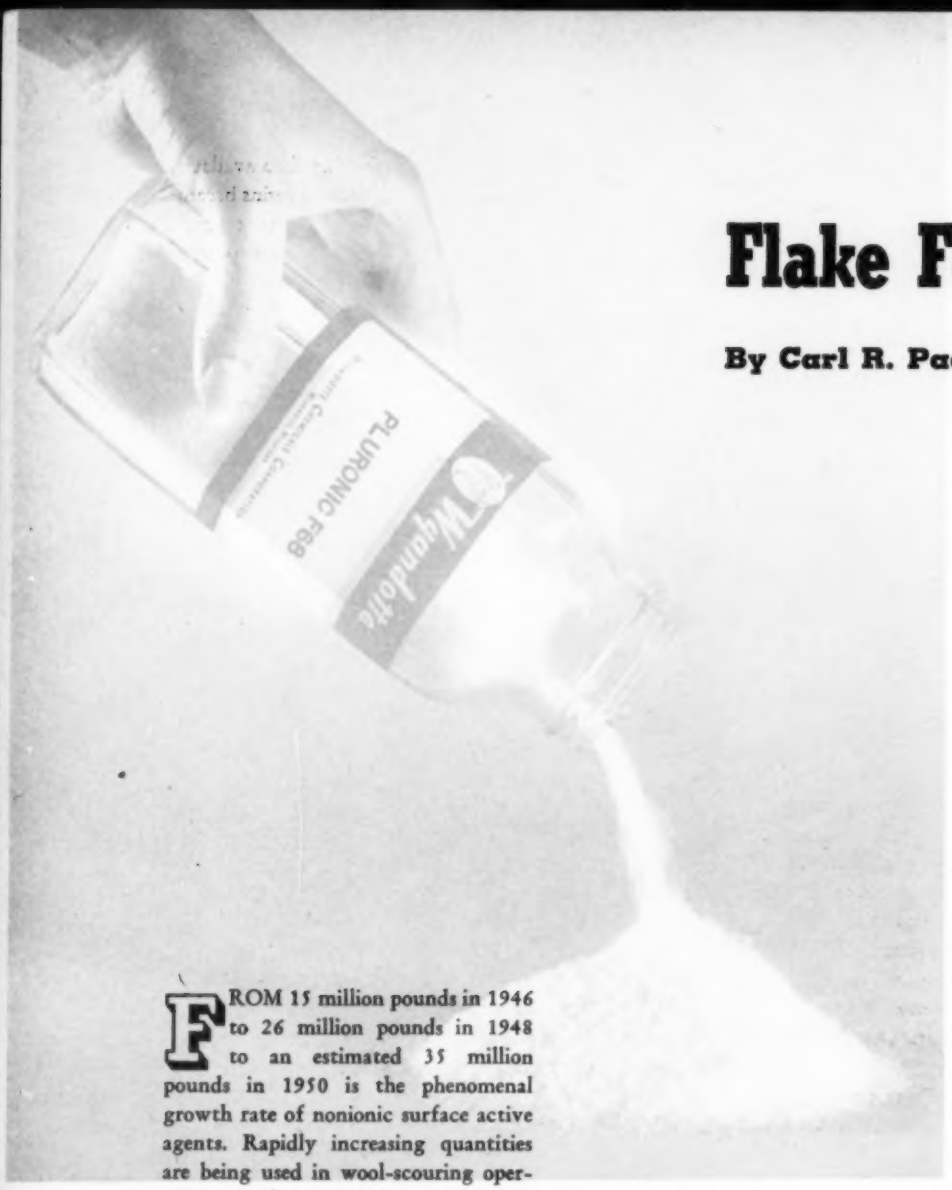
In the paper "Optical Bleaches in Household Soaps and Detergents" by E. I. Stearns of Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J., development of optical dyes was demonstrated from simple fluorescent products such as stilbene to the more complex products, to give them desired characteristics.

The paper, *"Identification of Sodium Soap Phases by X-Ray Diffraction,"* by R. D. Vold, J. D. Grandine, and H. Schott of the University of Southern California, gave a carefully prepared group of data showing that the crystal structure of soaps may be determined by the use of the X-ray spectrometer. Sodium palmitate was shown to exist in a number of definite forms. Water present can effect the lattice structure. Up to three per cent of the water appears bound, but whether this is present as a solid solution or as a hydrate is not known. Only the semi-hydrated form is known to exist. Eleven patterns for the palmitate have been found to exist. The problem still remains as to the significance of these patterns and whether or not they may be related to phases in the Gibbsian sense. Work is being continued on this problem.

P. H. Caskey of Illinois Water Treatment Co., Rockford, Ill., described the work on ion exchange for glycerine purification in a paper entitled, "Ion Exchange in Glycerine Purification." Undertaken three or four years ago, the work was unsuccessful due to the types of resin then available. Later more strongly basic resins became available and the project was reconsidered. More recent developments have enabled the process to be developed to a point where it is entirely possible to make a CP grade of glycerine from any lye except those high in poly glycerides. It is not possible to remove 100 per cent of the impurities from any given lye, but purity is approached by passing the product in stages through the ion exchange equipment. For this reason, the equipment is essentially a batch process. The following table shows the partial analysis of two samples of glycerine purified by this process.

The cost of this process is dependent on the amount of materials removed. For this reason the purification of sweetwater is the least expensive since the salt content is low. The estimated cost of converting such a product to CP glycerine is given as 0.25 to 0.75 cents per pound. Saponification crude diluted to 25-30 per cent before treatment and reconcentrated will cost approximately 1.5 cents per pound. A soap lye which contains a high percentage of salt will cost approximately 2.5 cents per pound for conversion. At the present time a plant processing 100,000 pounds of Sweetwater a day is in operation and in addition a large soap company is presently installing equipment to replace the use of a distillation unit.

On board boat for sightseeing trip of San Francisco Bay are W. A. Peterson of Colgate-Palmolive-Peet Co., Jersey City, N. J., and C. B. and Mrs. Patterson of Pacific Coast Co.; at right boarding bus for copra plant trip are F. B. White of Foster Wheeler Corp., New York; E. D. Gile, Opelousas Oil Refinery, Opelousas, La.; O. J. Fiala, Durkee Famous Foods, Chicago, and L. R. Brown of A. E. Staley Manufacturing Co., Decatur, Ill.



Flake Form Nonionic

By Carl R. Pacifico, Lester G. Lundsted

Research and Development Division,

FROM 15 million pounds in 1946 to 26 million pounds in 1948 to an estimated 35 million pounds in 1950 is the phenomenal growth rate of nonionic surface active agents. Rapidly increasing quantities are being used in wool-scouring operations, in home laundry compounds, in dishwashing applications, and in many formulated cleaning products.

This rapid acceptance of nonionics has resulted from the many well-known advantages of these products. For example, nonionics can readily be tailored for a high degree of activity in most applications by proper selection and balance of the hydrophilic and hydrophobic portions of the molecule. In the case of many nonionics, the process of manufacture is relatively simple and easy to carry out. In addition, the nature of the process is such that the product usually contains very nearly 100 per cent active agent, thus being essentially free of contaminants and diluents. Finally, as the volume of production has increased and manufacturing techniques have improved, nonionics have become as cheap or cheaper on an active agent basis than competitive anionic products—an important factor which will probably accelerate the use of nonionics in many fields.

However, in spite of the advantages of nonionic surface active agents, their acceptance in many industries has been hampered or made impossible by the fact that manufacturers have been unable to produce a nonionic in flake form. As a result, all markets which require a flaked product have gone to the anionic agents by default.

This has not been due to lack of interest in the manufacture or the use of flaked nonionics. Rather, the problem is much deeper and appears to be inherent in the basic structure of nonionic surface active agents. The nonionic detergent molecule consists of a hydrophobic (water-insoluble) unit such as a fatty acid, fatty alcohol, alkylphenol or long chain mercaptan combined with a hydrophilic (water-soluble) group. The most common hydrophilic unit is a polyethylene glycol chain which is usually introduced into the molecule by condensing ethylene oxide with the hydrophobic base.

Since it is known that high molecular weight polyethylene glycols are solids, it might be inferred that a hard nonionic could easily be prepared by condensing sufficient ethylene oxide with the hydrophobic base to produce a solid polyglycol derivative. Such a procedure does yield solid products, but these products have very low detersive ability because of an overbalance in the hydrophilic portion of the molecule. On the other hand, when the quantity of ethylene oxide is adjusted to give optimum detersive activity, the products usually are liquids or pastes. Past efforts to compromise and obtain a relatively hard product with reduced but acceptable activity have been unsatisfactory in that the products still were of too low a melting point to be stable in flake form. The problem, therefore, has resolved itself into finding a new technique for preparing nonionic detergents or the discovery of a chemical system in which surface active properties do not fall off sharply with an increase in the melting point of the product.

Recently a solution of this problem was achieved in these laboratories. Although all the details of this development are not being released at this time, it can be said that this was accomplished by employing a hydrophobic unit not previously used in the

Detergents

and Thomas H. Vaughn

Wyandotte Chemicals Corp.

manufacture of nonionics.

As in the case of other nonionics, variations in properties can be achieved by choice of the molecular weight of the hydrophobic unit and by adjustment of the hydrophilic-hydrophobic ratio. With this new hydrophobic unit nonionics can be prepared ranging in form from liquids to hard solids. Of particular importance is the fact that the use of this new unit permits the preparation of a flaked nonionic detergent in which a modest sacrifice in some surface active properties is accepted in order to obtain the solid form and improvement in certain other surface active properties.

It is the purpose of this paper to discuss the properties of this new series of nonionic detergents and to show how their properties vary with molecular weight and hydrophilic-hydrophobic ratio. For convenience, these products will be referred to by their trade name, "Pluronic," which has been selected for this series. Each individual member is further designated by a letter and a two-digit number. "L" designates a liquid product, "P" a paste, and "F" a solid of sufficiently high melting point to permit commercial flaking.

The variation of physical and surface active properties with chemical composition is illustrated with four products. Pluronics L62, L64, and F68 constitute a series in which the molecular weight of the hydrophobic unit is constant while the ratio of the hydrophilic to hydrophobic portion of the molecule is increased. Another comparison is afforded by Pluronics L44 and L64. Pluronics L44 and L64 have the same hydrophilic-hydrophobic ratio, but Pluronic L64 is prepared from a hydrophobic unit of higher molecular weight.

TABLE I

Physical Properties of Pluronic Detergents

	*Pluronic L62**	*Pluronic L64**	*Pluronic F68**	*Pluronic L44**
Form	Liquid	Liquid	Flake	Liquid
Odor	Slight	Slight	Slight	Slight
Active Agent, %	100	100	100	100
Melting or Freezing Point, °C.	—32	—6	51-54	—11
pH, 0.25% soln. at 25° C.	6.5-7.5	6.5-7.5	6.5-7.5	6.5-7.5

* Trade names of nonionic products produced by Wyandotte Chemicals Corp.

Physical Properties

GENERAL: Table I presents some of the physical properties of these products. The melting point of Pluronic L44 is shown to be slightly lower than that of Pluronic L64 as might be expected from its lower molecular weight. It will also be noted that the melting or freezing point increases from —32° C. for Pluronic L62 to 51-54° C. for Pluronic F68. Thus, Pluronic F68 is sufficiently high-melting to permit its being flaked from rolls in standard commercial equipment to form a non-tacky, dust-free flake.

In the discussion which follows, data for two commercially available nonionic surface active agents are included for comparison. Nonionic A is a poylglycol ester type of product and Nonionic B is an alkylphenol polyethylene oxide condensation type. The anionic detergent included for comparison of some properties is a sodium alkyl aryl sulfonate type containing 40 per cent active agent.

TABLE II

Moisture Pick-Up of Pluronic Detergents

(80% Relative Humidity at Room Temperature for 7 Days)

	Gain in Weight, %
Pluronic L62	3.0
Pluronic L64	3.4
Pluronic F68	3.6
Pluronic L44	1.7
Nonionic A	7.4
Nonionic B	12.8
Anionic A	6.2

Hygroscopicity

THE hygroscopicity of synthetic flake detergents has always been a serious problem. It increases the cost of the shipping containers required, makes proper formulating for many uses more difficult, and introduces handling problems. In the past, manufacturers were unable to reduce this undesirable characteristic as it seems to be bound up in the chemical nature of the product.

The products in this series are relatively non-hygroscopic. The flake Pluronic F68 was found to be free-flowing after exposure in an open dish on a laboratory desk for more than a month.

Quantitative data on the hygroscopicity of these materials are shown in Table II. Each was exposed to air of 80 per cent relative humidity at room temperature for seven days. There appears to be a slight increase in hygroscopicity as the hydrophilic proportion of the molecule is increased although the differences are not great and the gain in weight of approximately three to four per cent is comparatively small.

There appears to be an increase in moisture pickup with an increase in the molecular weight of the hydrophobic unit as illustrated by Pluronics L44 and L64. However, all of these products show considerably less moisture pickup than a typical nonionic and a typical anionic product.

Rate of Solution: Rate of solu-

tion determinations were made under controlled conditions using the Phipps and Bird laboratory mixer. Four grams of material were added to 200 ml. of water in a 600 ml. beaker. The mixture was stirred at 100 rpm. at 25° C. with paddle wheels one by three inches in size, located so that the bottom of the wheel just cleared the bottom of the beaker. The time to effect complete solution was measured.

The data shown in Table III indicate that the rate of solution is reasonably rapid for all these nonionics in comparison with a typical flaked anionic detergent at this concentration. The solubility rate increases with the increase in the hydrophilic portion of the molecule as shown by the increase in the rate of Pluronic L64 over L62. Solution time increases slightly for the flake, Pluronic F68, indicating that the physical form as well as structure exerts an influence on the solubility rate. Also, as would be expected, Pluronic L44, being of lower molecular weight, dissolves more readily than does Pluronic L64.

Solubility: The solubilities of the Pluronics in water are affected markedly by the weight ratio of hydrophilic to hydrophobic units in the molecule. At 25° C. Pluronics L44 and L64 are miscible with water in all proportions to form liquid solutions. Pluronic F68 is also miscible with water in all proportions at 25° C., but solutions containing more than 75 per cent of nonionic are pastes to solids. In the case of Pluronic L62, the solubility at 25° C. is approximately 0.5 per cent. This value appears to be a minimum solution concentration since either a decrease or an increase in the solution temperature causes a marked increase in the amount of Pluronic L62 which can be dissolved in water to form a clear solution.

The solubility of most nonionics in water decreases with an increase in temperature. This usually results in a cloud point, which is defined as the temperature at and above which the solution is turbid because it can no longer contain a given concentration of surface active agent. Pluronic F68 is unique in this respect since it does not show a cloud point in either distilled or hard water up to 100° C., the highest temperature tested. The other three Pluronics L44, L62 and L64 show definite cloud points which are a function of the hydrophilic-hydrophobic ratio and the molecular weight. The cloud points at 0.5, 10.0 and 40 per cents are shown in Table IV. Pluronic L44 shows approximately the same cloud point as Pluronic L64 at use concentrations, but at higher concentrations the lower molecular weight at the same hydrophilic-hydrophobic ratio results in higher cloud points.

TABLE III
Rate of Solution of Pluronics
(Time Required to Form a 2% Solution at 25° C.)

	min.
Pluronic L62*	11.5
Pluronic L64	3.5
Pluronic F68	4.5
Pluronic L44	0.5
Nonionic A	2.0
Nonionic B	1.7
Anionic A	7.0

* Determined at 22° C.

Stability toward metal ions: The resistance of surface active agents to precipitation in the presence of metal ions may be measured according to the method proposed in ASTM Bulletin No. 141, August 1946. According to that procedure, the quantity of a one per cent solution of a metal salt required to cause a definite precipitation in a one per cent solution of the surface active agent at 30° C. is measured. If no precipitation occurs before an equal volume of salt solution is added, the surface active agent is considered to be stable. Each of the Pluronics was tested and found to be stable to precipitation by the following metal ions: Calcium, magnesium, copper, aluminum, ferrous iron, lead, zinc and nickel.

Surface Active Properties

SURFACE and interfacial tension: Tables V and VI present data on surface and interfacial tensions of aqueous solutions of these surface active agents. As may be noted, the ability to lower the surface and interfacial tension of water increases as the hydrophilic portion of the molecule decreases from that of Pluronic F68. As Pluronic L64 is more effective in this respect than Pluronic L44, it may indicate that increasing the molecular weight of the base above the level of Pluronic L44 improves this property.

The effectiveness of Pluronics L62 and L64 in lowering the surface

TABLE IV
Cloud Point, ° C.

	% Active Agent	*Distilled and Hard Water**	*Sea Water*
Pluronic L44	0.5	59	53
	10.0	73	61
	40.0	82	65
Pluronic L62	0.5	27	20
	10.0	18	12
	40.0	33	23
Pluronic L64	0.5	61	52
	10.0	64	54
	40.0	67	56
Pluronic F68	0.5	clear to 100	95
	10.0	clear to 100	91
	40.0	clear to 100	89
Nonionic A	0.5	68	60
	10.0	62	52
	40.0	72	61
Nonionic B	0.5	52	43
	10.0	58	46
	40.0	73	61

* 25 Grains hard water.

tension of water and the interfacial tension of water against mineral oil when present in a concentration of only 0.001 per cent is noteworthy.

Carbon suspension: The ability to suspend solid particles, particularly pigment types, to some extent is a property of all detergents. The effectiveness of Pluronic F68, the only member of this series for which data are available, is particularly interesting in this respect as shown by the data in Table VII.

In this evaluation the suspending agent, in a concentration of 0.25 per cent, is placed in a graduated cylinder. A standard amount of Norite decolorizing carbon is added, the mixture is thoroughly shaken, then permitted to stand for 24 hours. The amount of carbon remaining in suspension is then measured with a photolometer. The results obtained are presented in Table VII. The figures given indicate the per cent of carbon remaining in suspension after 24 hours. Measurements were made both on suspensions of carbon in distilled water and in water to which NaOH had been added to give a concentration of 0.1 per cent.

As may be seen from Table VII, Pluronic F68 has excellent carbon suspending properties, being superior even to high quality, low titer soap in this respect. In addition, this property is not seriously diminished in alkaline media where the suspending power of alkylarylsulfonate-type agents is sharply reduced. Pluronic F68 approaches in this respect sodium carboxymethylcellulose. It is interesting to note that a combination of sodium carboxymethylcellulose and Pluronic F68 shows a synergistic effect in their carbon suspending power.

Wetting Speed: As shown by Table VIII and Figure 1, the wetting ability of this series is particularly interesting. The wetting speed was measured by the well-known canvas disc method.

Although some nonionic surface active agents show a gradual decrease in wetting power with increase in solution temperature, each of the products in this series, at a concentra-

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TABLE V

Surface Tension at 30° C., Dynes/Cm.

Concentration, %	1.0	0.1	0.01	0.001
Pluronic L44	41.2	45.2	47.2	52.5
Pluronic L62	34.5	37.1	40.2	45.6
Pluronic L64	36.0	40.0	43.8	48.6
Pluronic F68	43.6	46.6	47.4	64.0
Nonionic A	39.1	42.5	46.6	60.0
Nonionic B	32.0	31.9	34.3	53.5

TABLE VI

Interfacial Tension Against Nujol at 30° C., Dynes/Cm.

Concentration, %	1.0	0.1	0.01	0.001
Pluronic L44	10.3	12.1	17.4	20.2
Pluronic L62	3.1	5.8	8.4	12.0
Pluronic L64	7.5	9.8	13.3	16.9
Pluronic F68	13.2	16.0	16.5	29.8
Nonionic A	5.8	6.8	10.4	16.9
Nonionic B	3.8	3.8	11.7	18.5

TABLE VII

Carbon Suspending Power of Some Surface Active Agents

(Carbon remaining in suspension after 24 Hours, %)

	Water	0.1% *NaOH*
Distilled Water	3.3	3.3
Anionic A	35.0	4.2
Low Titer Soap	32.0	33.0
Pluronic F68	35.0	32.2
Sodium Carboxymethylcellulose*	38.0	35.0
90% Pluronic F68 10% Sodium Carboxymethylcellulose*	45.2	35.0

* Carbose D—Trade name of a sodium carboxymethylcellulose made by Wyandotte Chemicals Corporation.

TABLE VIII

Wetting-Out Time of Pluronics by the Canvas Disc Method

Concentration, %	0.1			0.25		
Temperature, ° C.	30	60	90	30	60	90
	sec.	sec.	sec.	sec.	sec.	sec.
Pluronic L44	>300	25	14	>300	9	17
Pluronic L62	81	47	38	12	20	31
Pluronic L64	235	35	32	43	12	27
Pluronic F68	>300	107	18	>300	70	16
Nonionic A	>300	65.6	23.3	159	35	21.8
Nonionic B	11.8	20.9	22.2	3.1	13.6	16.4

Planning and research behind

Soap Advertising

By William G. Werner*

Manager, Division of Public Relations
and Consumer Information
Procter & Gamble Co.

Outdoor Advertising

I HAVE been asked to contribute what I can from the viewpoint of a national advertiser toward consideration of the question: What is the attitude of the public in general toward current claims of national and national-local advertising?

While no man should presume to speak for all manufacturers, the views I express, based on our experience, may, I feel, be considered typical of those of many, many other progressive manufacturers of consumer goods.

In considering advertising, I think it most important that it be viewed not simply as of today, but as continuing over a period of time. Facing, as he does, a stream of perplexing changes in competition, technology, consumer habits and economic conditions, any manufacturer of consumer goods has to keep in mind, above all, that the stability of his business is vital. A steady, strong, profitable business is best able to fulfill its prime function as a servant of the consumer and as an employer. The importance of advertising as a business stabilizer, therefore, should always be kept in mind when we consider the problems of consumer products.

In our own business, our policies in buying, selling, finance and research, as well as in advertising, all contribute to the assurance of a stability that makes possible forward-looking industrial relations plans, most dramatically examplified by our guarantee to regular factory workers of 48 weeks' employment per year. Consequently, we consider the continuous flow of advertising and promotion messages to consumers not only a builder of good-will for our brands, but also a very important stabilizing influence on our business and thus, in turn, on our employment.

Yardstick of Success

THE manufacturer of consumer goods, as I see it, succeeds or fails over a period of time to the extent that he serves the public in three ways: 1.) He runs his company with operating policies that are sound in buying and selling, finance and research; 2.) he recognizes to the fullest his responsibilities toward his employees; and 3.) he serves through products which uniformly deliver the promised results in return for the price paid.

The work of the Better Business Bureaus is tied up most closely with the last of these service ideals mentioned: "delivery of the promised results for the price paid." Fulfillment of this ideal is not as easy an asignment as might be suggested by a superficial mouse-trap sort of philosophy, "Just make a good product and tell people about it." First, merchandise must be created that people will want, then advertising must be created that will interest consumers and impel them to buy. Before a manufacturer can do either of these things, he has to ask himself a number of questions concerning consumers' desires, needs and habits of use.

In view of the questions which men from the local Bureaus ask the National Bureau every once in a while about national advertising and national-local advertising, it has occurred to me that I can do your cause no better service at this moment than to tell you something about the kind of questions an advertiser does ask him-

* Based on a recent talk before the 36th annual conference Association of Better Business Bureaus, Inc., Washington, D. C.

self, before he markets his products and launches his campaign.

We haven't the space to discuss the many steps the manufacturer must go through before he has the product right: we are really concerned here with advertising—the "promise of results" where the advertiser is faced with choices: which of many good points shall he stress; to which shall he give secondary weight? At this point he is forced to ask himself, "Are we pointing out in advertising those characteristics of the product likely to be most interesting—interesting not just to us, but to our consumer?"

Now, when the average person thinks of a manufacturer faced with questions like this, he is likely to conclude that the answer to them comes either as the result of a lot of heavy thinking by experts, or as a result of the autocratic hunch-decision of a business tycoon. With many, many consumer products, however, the answer is arrived at in a far different way: it comes as a result of a lot of doorbell-ringing and questioning of consumers by representatives of the manufacturer, his advertising agency, or outside research people. For, you see, advertisers are learning more and more to mistrust their personal hunches when an evaluation of broad consumer-opinion is involved.

To emphasize the importance of this viewpoint, I should like to tell you about some work which we do—always with the caution that you remember that many other manufacturers of consumer goods arrive at their decisions through much the same process as we—differing in detail, but with the same end in view.

What the Customer Wants

WHEN we consider several advertisable characteristics of a brand of goods, we have to keep in mind that not all virtues which appeal to the engineer or the inventor or the creator of the product have equal sex appeal with Mrs. Housewife. For instance, while floating is a desirable characteristic in a bar of soap, mildness, we will say, may be a more desirable one to far more people. The manufacturer who determined to spend a large sum of money advertising floating might find his competitor spending half as much on mildness—the characteristic more interesting to consumers—and getting the business.

In developing new brands or improving old ones, and in the choice of advertising appeals to determine the degree of consumer interest in the different virtues of our products, we in Procter & Gamble make use of a Market Research Department and what we call our Products Service Department. Here we have a test kitchen, laundry, bakery, beauty shop, textile, skin and dental laboratories, and so on. Through these departments we try to be sure that our products give the consumer what she wants in results, and that our advertising concerning them talks in terms of her interests and experience.

Let's take the study of clothes washing products as an example: Our test laundry equipment gives us the benefit of several different kinds of washing machines, so that we can try out a soap or detergent or a new washing technique under all conceivable household conditions, with all degrees of water hardness. Even so, we still want a rule-of-thumb "practical" test, too; so, through our Market Research Department, we submit the product or the new washing technique to hundreds of consumers in typical communities to try out under conditions of ordinary home use. Reports received back at headquarters on these tests are placed against the more scientific type of data turned up in our Products Service Department laundry.

When, as recently, we embarked on a national campaign to point out that "Tide," a heavy-duty household synthetic detergent, could be used without rinsing, this was not done just because we felt that the idea was a good one; it was done because, after consumer research, we found that the technical advantages, which we knew existed in the laboratory, were recognized by housewives. By calling on them and asking them to make tests and asking what they found out, we discovered an overwhelming interest in eliminating the back-breaking work required in rinsing clothes. We found, too, a prompt acceptance of the fact that clothes washed with this product without rinsing were white and attractive.

In just the same way, through keeping close to consumers, we get their opinions on many other questions having to do with our products—such as users' appreciation of the aesthetic features like style, color and design, their understanding of use-directions on packages, their impressions concerning value, dependability, and so on.

This is a continuing program for all of our active brands, because we never may forget that we are under an intensely demanding set of conditions as to the quality and value of the goods we turn out—our consumer buys every few days and can leave us very easily by going to the corner store and buying a competitor's brand. Other manufacturers of consumer goods face a similar problem, and likewise, through applying techniques to fit their own businesses, have learned the value of, you might say, "living close to the consumer."

So with product after product, the choice of the virtues and appeals used in advertising is not just the dreaming up of bright ideas by copywriting geniuses, but the result of the less glamorous and more plodding process of making call after call on users to study their needs, to probe their minds, to find what does appeal to them and what does not. Viewed in this light, you will see that the creation of advertising claims is not essentially a competitive process so much as it is a service process.

Quite often, in fact, a manufacturer in a highly competitive field of consumer products will discover by talking to typical users that the reasons why his product serves consumers best and interests them most are about the same as those which make the competitor's brand likewise appeal. This results in active competition between manufacturers to present those perfectly valid reasons in the most interesting, stirring way in advertising.

Such competition for the attention and interest of the consumers, far from being discouraged, should be encouraged as an exemplification of the fact that we are living in a free America—where people may still buy by choice—and not in a regimented, standardized economy.

A manufacturer in this intensely competitive field of marketing consumer goods must, too, keep asking himself the question, "Granted we know what characteristics are likely to be most interesting to our consumers, are we putting those characteristics before them in a way to get the greatest return possible for *every* penny spent in advertising and promotion?"

Appeals Tested

INTELLIGENT advertisers of consumer products go to great lengths in searching for the answer to this question, because, in marketing low-cost, repetitive merchandise, every hundredth of a cent per package increase in advertising cost can run into big dollars mighty fast. This is why you will find that advertisers in this field, particularly, test alternative copy appeals with consumers singly and in groups; they study the reports of radio listeners as hungrily as an investment trust statistician scours his daily market reports; they analyze mail coupon returns; compare movement in stores; they pit one appeal against another in test territories before they go national in use of either appeal. All of this is not alone in the interest of saving advertising dollars; it is in the interest of the consumer, who is benefitting through the more efficient use of advertising as a mass-market selling tool.

But over and above all of these questions one should ask about consumer goods advertising is this one: "Are the advertising claims supportable when viewed through the exacting magnifying glass of practical test?"

This question is not prompted simply by considerations of morals or ideals, although such thinking is obviously ethically sound; it is a matter of just plain good business. It is good business to make sure that your consumers find in your product the things your advertising says are in it.

You naturally may ask, first of all, "What do you mean by 'supportable'?" By "supportable" I mean making sure through test of the product that the advertising claims are justified—demonstrably provable—in the laboratory and/or in practical use. (I say "and/or" because, of course, some types of ingredient claims necessary in, say, the drug products business—such as a "chemically pure" statement, for example—are demonstrably provable only in the laboratory.)

At Procter & Gamble we make sure of this dual requirement in three ways: first, by drawing on engineers and home economists in our own Products Service laboratory; then, by going to what you would call "practical" users in the field (such as typical housewives, commercial chefs, bakers, beauticians, dentists, dermatologists, etc.); and finally, by consulting reputable independent test laboratories (sometimes these are in a consulting business and sometimes they are in universities and colleges).

By "supportable" I mean also that the advertising claims are fully in line with the word and spirit of state and national laws, as well as the decisions and regulations of government agencies such as the Federal Trade Commission, the Food and Drug Administration, etc.

Court Decisions Watched

IN our own business, we keep very close track of all court, bureau or commission decisions in all fields that have anything to do with consumer merchandise, so that the latest official point of view on advertising toward problems of this kind is kept in mind by our people. We have a legal review section in our Division of Public Relations which includes two lawyers who spend practically all of their time on this type of work. Every claim for every product is catalogued and the pages are constantly reviewed from a technological-legal standpoint, to keep them up-to-date as used in current advertising. The labeling of every product likewise is reviewed by these people; also promotion material used in stores and house-to-house. All contests are cleared with the United States Post Office Department as well.

To be sure that we are in touch with what our competitors are doing, we review competitive advertising as fast as it comes to our attention. We keep track of competitive brands through a scheduled system of picking up samples of all of the important products with which our products compete, together with samples of our own brands, from typical stores, on a countrywide basis. The minute our technical staff finds a change or an improvement in a competitive product which negates or makes unsupportable an advertising claim we are making, our advertising people and our legal review people are advised of this fact, so that our advertising may be promptly brought in line with the technological conditions as they exist.

At times, of course, situations arise in which packages are already in store distribution or magazine plates are on the press, and obviously cannot be changed to meet such a problem. However, wherever possible, we make certain that all advertising, promotion material and package text which leaves our agencies or our factories is in line, from a standpoint of legal supportability of claims, with the technological data on competitive products we can obtain as of that date.

Viewed in the light of all of this market research, laboratory check and legal review, we feel that a consumer can read the advertising placed by our company and know—first, that the statements in the advertising are provable and supportable from a technological and a legal standpoint; and second, that if the consumer uses the products according to instructions, she will get the results the advertising promises.

May I emphasize that these ideals of advertising accuracy and product performance are not unique with our company—they are, in my opinion, essential guideposts of operation for any forward-looking manufacturer of consumer goods. They sum up what I mentioned earlier as the third responsibility of a manufacturer

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TOILET SOAPS

By J. M. Vallance and F. V. Wells

Part II—Milling and Plodding

DESPITE the fact that under certain conditions what goes into the soap kettle may subsequently undergo desirable physical modifications as well as the normal chemical reactions, due care must still be taken in the selection and treatment of soap stocks. Refining and bleaching of oilstocks must be carried out as and when required. Sometimes, too, the saponified fats are washed in the kettle, bleached by boiling up with hypochlorite solution, and then grained out as usual.

As there is frequently a good deal of tallow present in a toilet soap charge, it is sometimes held that extra care must be taken to insure complete saponification, even to the extent of using the old-fashioned "strengthening" or "strong" change. In modern batch boiling practice, saponification should be completed at the first or "killing" change, although two or more partial saponification changes may be used in countercurrent wash systems, in which used lyes are passed on from one kettle to another. In ordinary single batch practice, the kettle contents should be kept as "close" as possible and a reasonable excess of caustic should at all times be present, especially once the reaction has properly started.

The constants of the finished neat soap should be approximately 0.05 per cent free alkali as Na_2O and 0.5 per cent NaCl.

The cooling and drying of soap for subsequent use as milling base involves the loss of some 15 to 20 per cent of water. The moisture content of the finished toilet soap cakes should not exceed about 14 per cent. Loss of water during milling and plodding runs to about one to two per cent with modern equipment but may rise to as much as four per cent or so in those few cases where the old-style granite roll mills are still used.

Soap may be cooled by running it into frames or cooling presses to solidify; it may be cooled and dried by spraying into concurrent or countercurrent air of different temperatures; or it may be run on to a chilling drum or series of rollers—the solid, partially dried film being then suitably broken up and passed into a specially constructed drying chamber. Toilet and shaving soap bases may also be dried successfully by running them over steam-heated rollers followed by a further run over water-cooled rollers,

A battery of toilet soap mills in operation, showing return conveyors for second milling.

as in the completely mechanical John Brown's double drum drying process.

Frame mold or press cooling, involving the conversion of the soap into large slabs that are subsequently cut into chips, has sometimes been commended as superior to the more modern drum drying. Used to some extent still in smaller soap factories, its chief and very limited advantage is that it saves initial expenditure on more modern drying plant. Some writers in the past have claimed that soaps cooled slowly in frames have less tendency towards subsequent rancidification, for the reason that the minute traces of free fat that they contain are subjected to "supplementary saponification" in the frames. On the other hand, the plain facts can scarcely be disputed that vast quantities of soap base, rapidly dried by the chilling roll system, have been marketed successfully; that fully boiled soaps should in any case be properly saponified prior to drying; that the chips produced by the more modern drying process are dried more evenly, less rubbery and more suitable for milling and plodding; and, finally, that the lathering and solubility properties of toilet soaps made from rapidly cooled soap base are usually superior to those of soaps made from similarly constituted bases that have been framed, slabbed and chipped.

From the point of view of soap quality, therefore, as well as from the economic and mechanical standpoints, all the advantages appear to be in favor of the now familiar drum-and-oven drying plants. Opinions differ on the subject of spray-dried soaps, and it must be admitted that the spray-dried base does in many cases exhibit a tendency towards fairly rapidly ensuing and well-defined rancidification.

Chilling Roll Machines

THE more modern chilling roll machines do not make use of as many rolls as the earlier types. Five rolls were originally used but the customary number now is three—one large diameter roll and two smaller ones. Actual size varies with make and potential output, but the large, internally water-cooled roll may measure as much as five feet in length and 12 feet in diameter. On this polished steel roll the hot soap solidifies, is cut by sharp steel needles, and is then removed as scored-off ribbons by a long scraper blade arrangement which bears against the surface of the roll. The ribbons fall on to a feed conveyor that delivers them to the drying chamber, where the desired amount of moisture is removed.

While the chilling roll is normally installed at ground level, in reasonably close proximity to the drying cabinet or chamber, in some plants it is mounted on top of one end of the chamber. If on the floor level, a covered elevator conveyor carries the ribbons to the top level of the dryer, it being highly desirable that no sudden and variable heat loss (as caused by drafts in cold weather) should occur at this critical point.

In a typical plant, the chilling roll device receives the liquid soap from a crutcher and converts it into ribbons, which then enter the top of an all-metal, insulated drying chamber, equipped at the base with grilled tube radiators. Hot air is distributed uniformly from these heating units, through a system of specially arranged baffles, by means of multi-bladed low pressure fans, which are mounted on top of the cabinet. A first essential of dryer design is a high level of insulation, preventing the admission of cold air and ensuring that the air heated by the radiators flows evenly through the band conveyors on which the ribbons are carried from one end of the chamber to the other and then back again at a lower level. The ribbons soon lose enough moisture to become fairly brittle and break up into chips, during their transit inside the chamber.

The drying of the soap chips may be controlled by regulating the steam pressure in the heating units, by adjusting the speed of the bands, by varying the flow of air through the dryer, and (less frequently) by controlling the humidity of the hot air—as, for example, by recirculating a proportion of the exhaust air and restricting the cold air intake proportionately. As Thomssen and McCutcheon point out, (3) "the capacity of the dryer also depends upon the moisture content and the condition of the finished flakes." Small British plants have an output of some 300 pounds of soap chips per hour, while larger plants run to about twice, four times, six times and even over ten times this quantity.

Soap drying chambers obviously should be easy to inspect and clean, especially since small particles of soap customarily find their way to the bottom of the dryer and, in the case of wet or overheated soaps of low titre, traces may cling to the conveyor bands. Most dryers are fittted with adequate access doors or panels at both ends and sides.

A range of 11 to 15 per cent moisture content in the finished chips is usually adequate for all contingencies, the exact percentage being dependent upon the type of soap being produced and the nature of subsequent treatment (e.g. the type and amount of perfume, superfatting agents, etc. used; also the further loss of moisture, if significant, caused by milling.) It is important that the degree and uniformity of chip drying should be standardized carefully for each specific type of soap. Overdried soap may cause grittiness or crumbling while underdried soap may stick to the milling rolls, get too hot in the mill or plodder, and cause blistering, distortion, etc.

Storage Factors

AFTER drying, the chips are conveyed to storage hoppers, ready for subsequent mixing and milling. If the toilet soap maker does not produce his own milling bases, he should make sure that his supplies are constant as to color, texture and composition. It is sometimes sound practice for him to stock bases of different water content and chemical composition. At all times it is desirable that incoming stocks of milling base should be properly stored, in order to avoid further drying out in hot, dry weather and excessive hardness (necessitating a longer and slower milling process) during cold spells.

If soap frames are used for

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Niagara Alkali—1900-1950

CELEBRATING its 50th anniversary this year, Niagara Alkali Company was organized in 1900 under the original name of the Roberts Chemical Company. Largely, it has been a pioneering company in the field of electrochemistry, the ramifications of which spread into most of modern industry.

In 1900, chemicals generally were made abroad and sold in the U. S. in a way to discourage their manufacture. Domestic production primarily was confined to heavy acids, sulfuric, nitric and hydrochloric, and to the soda alkalies.

In those days Niagara Falls was just developing as a vast and inexpensive source of hydro-electric power. With abundant cheap electricity available, an efficient electrolytic cell to utilize it for chemical purposes became a necessity. Many investigators were working on this problem when Isaiah L. Roberts devised a cell diaphragm which he believed would last. Others, either destroyed by caustic soda on one side, by chlorine on the other, or by strong brine on both sides, had previously stood up only a few hours, or days. Roberts' cell was designed around a diaphragm consisting of an asbestos cloth bag supported by wire netting. Within it was suspended a cylinder of asbestos board, with powdered coal four inches thick between the bag and the cylinder. The whole cell consisted of a steel tank 4½ feet in diameter and 5 feet deep, with a slate cover.

Obtaining a patent on his cell, Roberts joined forces with Wesley S. Block, who had just sold out his interest in the Welsbach gas mantle and was searching for employment of capital. Assets consisted of Roberts' cell, some thirty patents and Block's capital, ultimately amounting to approximately $100,000.

In March, 1901, the new company was ready to operate, the products being caustic potash and bleaching powder, potash having been chosen in preference to soda because no other company then was producing it in the United States.

The Roberts' cell developed faults and the company operated with difficulty for some years, despite the fact that it embarked upon a second pioneering venture. This was a patented method of burning hydrogen in chlorine to yield high purity hydrochloric acid. About this time, in 1909, Electro Bleaching Gas Co. moved to Niagara Falls, and entered into a contact with Roberts Chemical to purchase chlorine for liquefaction. This provided a steadier market for chlorine.

THE LATE EDWARD D. KINGSLEY

Ned Kingsley and Bernard C. Hesse entered the business as heads of the Electro Bleaching Gas Company. Mr. Hesse, a chemist, in considering the weakness of bleached cotton goods, had concluded the cause to be the action of lime in the bleaching powder and came to the conclusion that liquid chlorine, as yet unknown in America, would produce whiteness without weakness.

After a rather difficult time trying to introduce chlorine bleaching in the textile industry, impetus was gained, strangely enough, from the success of chlorination of drinking water. A second installation for this purpose was made at Wilmington, Delaware. The equipment used is still the basis of modern chlorinating outfits with the exception of vacuum chlorinators. So successful was it that a textile mill in Wilmington began to use chlorine for bleaching.

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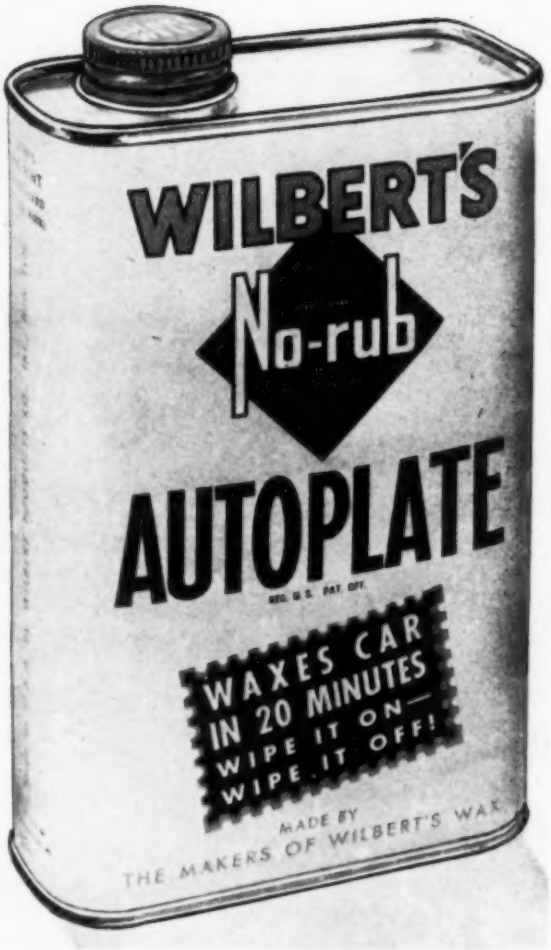
S. WILLARD JACOBS

J. CLARKE CASSIDY

WILLARD H. WEED

WHAT'S

New soap gift item by Allen B. Wrisley Co., Chicago, is this soap chest. Designed to retail for $1.50, the two layer soap gift chest comes packed with four bath size cakes of white, floral decorated soap, and six matching guest cakes.

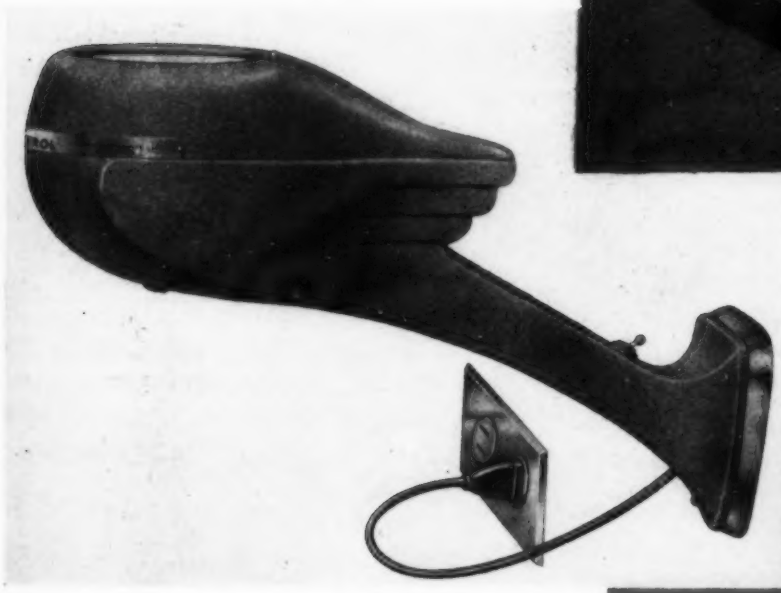


Latest addition to the growing list of car polishing and cleaning products containing silicones is No-rub Autoplate made by Wilbert Products Co., New York. The new polish, which contains a General Electric Co. silicone, is fair traded to retail for 79 cents in the pint size can. The polish is applied to a clean automobile, let dry and then wiped off.

Physicians' and Surgeons' toilet soap, sole product of Physicians' Supply Co., Cincinnati, has been repackaged and the shape of the soap has been changed. It now comes in a new, glossy, red and white wrapper. Counter display is new, too.

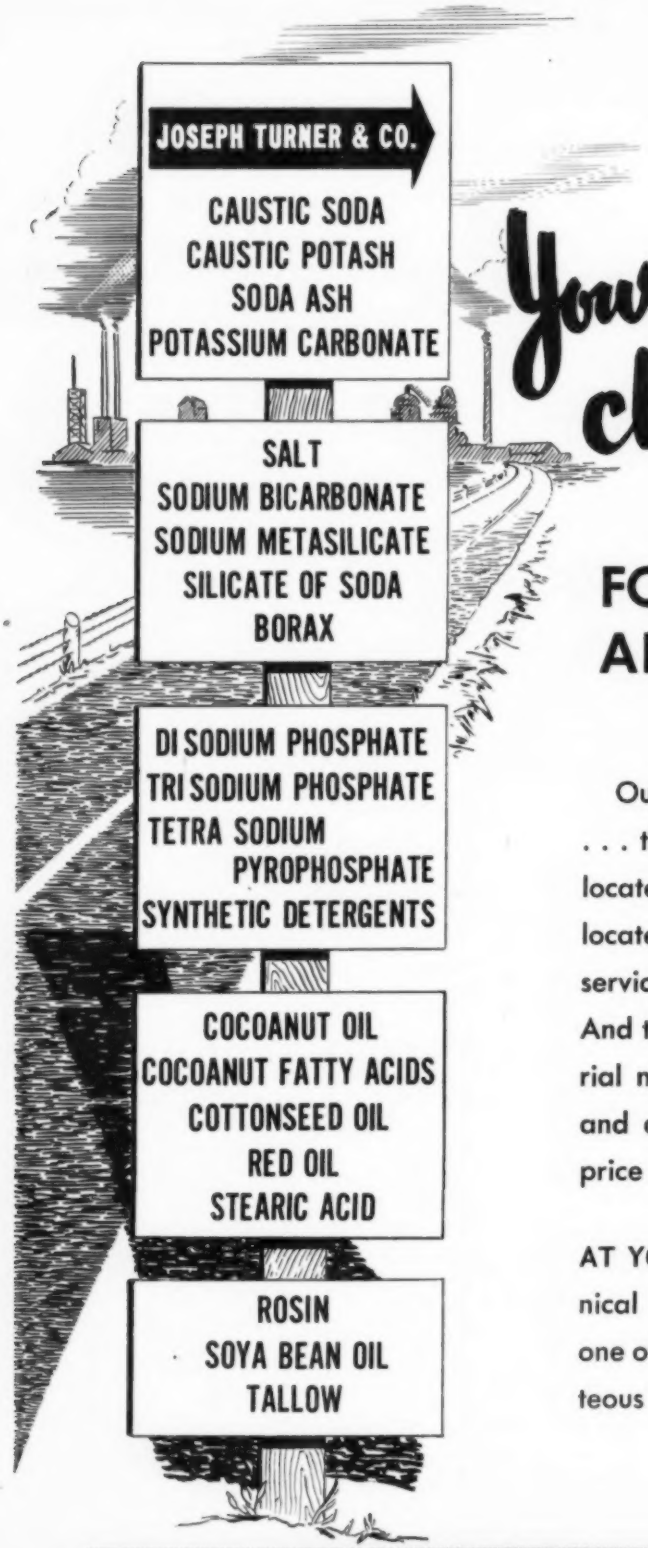
S NEW?

Newest application of the aerosol pressure package is for Rise shave cream made by Carter Products, Inc., 53 Park Place, New York. The four-ounce package, which retails for 59 cents, is said to contain enough cream for 50 shaves. To operate, can is shaken before use, black button at top is turned and pressed down and aerated lather pours from spout.



Something new in insect control is the device of that name shown above and made by Remington Products Corp., Elizabeth, N. J. The dispenser works on the vaporization principle and is thermostatically controlled. It is attached to the wall about three feet below the ceiling and plugged into any standard AC or DC outlet. Windows and doors are closed during operation. The insecticide is distributed by vaporization. It is said to contain neither kerosene nor acetone and is odorless.

For its cream furniture wax, S. C. Johnson & Co., Inc., Racine, Wis., have chosen the new pint bottle shown at right.



Your road to better chemicals... plus

FOR THE SOAP AND ALLIED INDUSTRIES

Our customers get a *plus* with every order . . . that *plus* is service facilitated by stocks located in strategic cities. Our centrally located Chicago office gives fast, complete service to the Midwest and West Coast areas. And that *plus* is in stocks of every raw material necessary for the manufacture of soap and allied products, available at the right price for immediate delivery to your door.

AT YOUR DISPOSAL: Our experienced technical staff and facilities. Inquiries to any one of our offices will bring prompt and courteous response.

JOSEPH TURNER & CO

83 Exchange Place, Providence, R. I. RIDGEFIELD, NEW JERSEY 435 N. Michigan Ave., Chicago, Ill.

TRADE NEWS

Physician Soap Sales Head

The appointment of Donald Bonhaus as sales manager of Physicians' Supply Co., Cincinnati, makers

DANIEL BONHAUS

of "Physicians' and Surgeons'" soap was announced recently. He succeeds W. W. Carty.

At the same time, the 62-year-old concern, whose physician's soap is its sole product, announced changes and improvements in the shape of its bar of soap, wrapping and packaging and retail displays. The product now appears in a new, glossy, red and white wrapper. "P&S" soap has been marketed primarily through chain and independent retail druggists since 1888.

In line with plans for expanding sales, the product is being offered on a limited basis to some new markets. A new one-ounce guest cake is to be produced for sale to hotels, tourist courts, and institutions, according to Mr. Bonhaus.

New Dallas Soap Firm

Gem Products, a new Dallas, Tex., chemical firm, recently leased and occupied a 7,500 square foot building at 178 Avery St., where it is engaged exclusively in the manufacture of commercial granulated soap. Other types of soap are to be produced later, according to the heads of the new company, Vance M. Braley and Ernest L. Heitfeld, both formerly of Honolulu.

The new firm is specializing in the manufacture of industrial soaps and chemicals, and represents an investment of over $50,000. Present plans call for supplying the wholesale and jobber supply field exclusively. The plant is said to have a capacity of over 28,000 pounds per day.

McClure in Pepsodent Post

John F. McClure, formerly an account executive with Kenyon & Eckhardt, Inc., New York advertising agency, was recently named to the new post of merchandising manager of the Pepsodent Division of Lever Brothers Co., New York.

Detrex Names Jacobs

Gordon A. Jacobs was recently appointed representative in charge of the Dallas division of Detrex Corp., Detroit. Territory covered by the division includes the states of Texas, Louisiana, Oklahoma and Arkansas. He is a graduate engineer with experience in marketing, field servicing and consulting on the company's processes.

GORDON A. JACOBS

Putnam in Ultra Post

Sherman W. Putnam, formerly assistant general sales manager of Dow Chemical Co., was appointed recently

SHERMAN W. PUTNAM

as general sales manager in the midwest for all products of Ultra Chemical Works, Inc., Paterson, N. J. He is making his headquarters in the new Ultra midwest sales office, located in the Lincoln Tower, 75 W. Wacker Drive, Chicago. The sale of the Ultra line of synthetic detergents, wax emulsions and industrial chemicals in the midwest is being serviced through the new Chicago office, with stocks continuing to be maintained at the firm's Joliet, Ill., plant. Besides its main plant and general headquarters in Paterson, the firm has a third plant in Hawthorne, Calif.

Soap Prices Increased

A 7½ percent increase in the wholesale price of household soaps was announced recently by Procter & Gamble Co., Cincinnati. Similar increases were reported to have been made by Lever Brothers Co., New York, and Colgate-Palmolive-Peet Co., Jersey City, N. J. The new price advance was reported to be based on a 20 percent jump in the price of tallow. An increase of 7 percent on household soaps was announced by P&G in July.

Bodman in New Lever Post

John W. Bodman, for 25 years director of research for Lever Brothers Co., New York, and for the past year and one-half chief development consultant, was recently appointed technical advisor to the management and the board of directors. He will have as his assistant Edward M. James, who joined the firm in 1937 as a refining expert. Both men will make their headquarters at the company's executive offices, 505 Park Ave., New York.

JOHN W. BODMAN

EDWARD M. JAMES

C. J. Gundel of Fels Dies

Charles J. Gundel, 57, retired chief chemist and superintendent of Fels and Co., Philadelphia, died Sept. 4, in Delaware County Hospital, Philadelphia. He had been with the firm for more than 40 years prior to his retirement in 1949.

Mr. Gundel, who was a Mason, is survived by his widow, two sons, three brothers and a sister.

Glycerine Inventory Rule

Glycerine, both crude and refined, all grades of caustic soda, liquid and solid, all grades of soda ash, alcohol and benzene are covered by Regulation No. 1 of the recently constituted National Production Authority. The regulation, the first to be issued, following passage of the bill authorizing the establishment of the Authority, is designed to control accumulation of excessive inventories of certain basic commodities. It does this by limiting the quantities of such materials that can be ordered, received or delivered. It applies to everyone buying or selling either for use or for resale, except consumers buying for personal or household use.

Under provisions of the regulation, inventories of the materials listed above, as well as a number of others, are to be restricted to "practicable minimum working inventories." This is said to mean "the smallest quantity of material from which a person can reasonably make his deliveries or supply his services on the basis of currently scheduled methods and rate of operation".

Penalties for violation of the regulation include fines of up to $10,000 or imprisonment for one year or both.

Former C-P-P Man Dies

James D. Adams, who retired in 1922 after having been in charge of the printing department of Colgate-Palmolive-Peet Co., Jersey City, N. J., died July 10. He entered the business as a boy and was with the firm for 50 years.

New Wyandotte P. R. Plan

The establishment of an employee and public relations division of Wyandotte Chemical Corp., Wyandotte, Mich., was announced recently by Robert B. Semple, president. George H. Baker, formerly in charge of a similar program for American Potash & Chemical Corp., is head of the new division. Its aim is to coordinate all human relationship activities of the company.

Antara Sales Change

Sales to all purchasers of detergents, emulsifiers and chemical specialties formerly handled by Antara Products Division of General Aniline & Film Corp., New York, have been taken over by General Dyestuff Corp., New York, it was announced recently. The products involved in the distribution change are manufactured by General Aniline & Film Corp.

A. P. Lee to Morristown

The removal of its offices from 150 Broadway, New York, to 81 Miller Road, Morristown, N. J., was announced recently by Alan Porter Lee, Inc., construction and design firm specializing in soap, fatty acids, glycerine and oil plants. The telephone number is Morristown 4-4428.

DuBois Is 30 Years Old

In connection with the celebration of its 30th year, DuBois Co., Cincinnati, recently announced the purchase of Giant Products Co., Los Angeles and changes in the DuBois executive family.

Louis Lerner, secretary-treasurer, and a 20 year veteran of the firm, has been advanced to the position of vice-president and director of sales, T. V. DuBois, founder and president of the company announced. Mr. Lerner has been succeeded by William H. Hey, formerly first vice-president of Provident Savings Bank & Trust Co., with which he had been associated for 35 years. Other officers of the company include Charles DuBois, vice-president and Edward Breckel, vice-president in charge of production.

DuBois Co., which manufactures a complete line of institutional cleaning compounds and industrial processing items, is completing a $2,000,000 plant expansion program, and is planning the introduction of new products for carbon and carburetor cleaning.

As a memento of its 30th anniversary, the company distributed a Jardin jewel chest, containing two cakes of its Jardin soap packaged in the utility chest, to each customer placing an order at the time of the anniversary celebration.

Soap Industry Profit Rate Down

THE soap industry showed a lower profit rate in 1949 than in 1940, according to a recent report of the Federal Trade Commission. The report made to Congress was a study of 25 major manufacturing industries in the United States. It is based on an analysis of the financial statements of 529 identical corporations in 25 manufacturing industries for the years 1940, 1947, '48 and '49. In addition to comparing prewar and postwar profit rates after taxes, the report also shows changes in profit rates which took place in 1947, '48 and '49.

The industries selected for study constitute a substantial segment of the nation's total industrial economy, the report states. It points out that their combined assets in 1949 accounted for 50 percent of the total assets of all manufacturing industries.

One section of the report contains a comparison of the prewar and postwar rates of return of the four largest companies in an industry with the rates of all other companies reported for that industry. The "other companies" referred to are, for the most part, concerns of medium or slightly less than medium size. The report does not include distinctly smaller-size corporations. It states:

"An outstanding characteristic of the industries studied is the continuation into the postwar period of the relationship which existed between the largest and other companies during the prewar period. If the larger corporations were more profitable than the smaller firms in the prewar period, they continued to be more profitable in the postwar period; and if the reverse were true in the prewar period, it continued to be so in the later period."

The soap industry was one of 13 that exhibited the same general relationship between the four largest and the other companies in the postwar period as in the prewar period, the Commission reported.

The section of the report dealing with soap, cleaning and polishing preparations covers eight firms. Their rates of return after taxes on stockholders' investments for the years 1940, '47, '48 and '49, respectively, were as follows: 17.5, 22.9, 18.2 and 6.6 percent.

Rates of return shown in the report were computed for the most part, on the average investment as of the beginning and ending of each year. The stockholders' investment consisted of the capital outstanding, paid-in or other capital surplus, earned surplus, minority interest in capital stock and surplus, and surplus reserves, less reported appreciation. The net income represents the profit after deducting all normal and regular costs and expenses and Federal income taxes.

Copies of the complete report may be obtained from the Federal Trade Commission while the supply lasts.

◆

Israel Toilet Soap Short

Toilet soap, already reported to be extremely short in Israel, will be even more difficult to come by as a result of a recently issued order by Dr. Israel Kastner of the ministry of supply and rationing, reducing the amount of toilet soap that may be purchased to one 100 gram bar every two months.

◆

Digest Article on G-11 Soap

An article, "Soap that Kills Germs", by J. D. Ratcliff and appearing in the September, 1950 issue of *Reader's Digest* discusses the development of the germicide "G-11", made by Sindar Corp., New York, and its use in soaps and other products. The results of the efficiency of G-11, or hexachlorophene, in reducing bacteria counts on the skin, particularly that of doctors in preoperative scrub-ups, are recounted. How the material is employed in deodorant soaps to reduce body odors resulting from perspiration is also told. Dr. William S. Gump of Givaudan-Delawanna, Inc., New York, of which Sindar Corp. is a subsidiary, is credited with the discovery of G-11 and also G-4, a fungicide, said to be highly active against the fungi that cause textiles to rot.

AASGP N.Y. Meeting Jan. 31-Feb. 1

TENTATIVE program details for the 24th annual convention of the Association of American Soap & Glycerine Producers, to be held Wednesday and Thursday, Jan. 31-Feb. 1, 1950, at the Plaza Hotel, New York, were discussed at a meeting of the convention committee at the Hotel Sherman, Chicago, Sept. 27. William G. Werner, director of public relations of Procter & Gamble Co., Cincinnati, is chairman of the convention committee. He succeeds John O. Brownell of Lever Brothers Co.

In general, the program schedule follows closely that of the 1949 meeting, with morning and afternoon sessions to be held on each of the two days, followed by the banquet on the second night. The meeting is to open with a general discussion session the morning of Jan. 31, at which time the welcoming address by AASGP president, Neil H. McElroy, president of Procter & Gamble Co., Cincinnati, is to be presented. A prominent economist will discuss the outlook for business and the soap market outlook will also be reviewed. A closed meeting of association members, a meeting of the board and a glycerine division meeting follow the group luncheon. That afternoon, too, the "Maid of Cotton" fashion show will be held, followed by a cocktail party and reception from 6:00 to 8:00 p.m.

The convention breakfast, for which one of the magazine publishers or publishing group is to be host, opens the second day of the meeting, highlights of which will include a general session in the morning covering the fats and oils outlook, synthetic detergents and the situation in Washington. The second group luncheon will be held Thursday noon, Feb. 1, the afternoon of which is to be given over to meetings of the specialty soap and industrial soap divisions. The president's reception and banquet and entertainment that same evening conclude the meeting.

we weren't born yesterday...

or too many yesterdays ago!

It is over fifty years since the Givaudan laboratories first produced aromatic chemicals for soap perfumery, and we haven't stopped for a moment since. This doesn't make us a bunch of old fogies, but we have the old timer's know-how, together with a unique store of special experience. Our chemical purity plus olfactory control are your assurance of quality. That's why Givaudan sets the pace in aromatic chemicals, as we do in other products for soap perfumery.

Greater Distinction through

Givaudan-Delawanna, Inc.

330 West 42nd Street, New York 18, N. Y.

Branches: Philadelphia • Boston • Cincinnati • Detroit • Chicago • Seattle • Los Angeles • Montreal • Toronto

Wyandotte Advances Rigger

The appointment of Robert K. Rigger as assistant manager, organic

ROBERT K. RIGGER

chemical sales was announced recently by Bert Cremers, vice-president, Michigan Alkali Division, Wyandotte Chemicals Corp., Wyandotte, Mich. A graduate of Princeton University in chemistry, Mr. Rigger was with U. S. Industrial Chemicals, Inc., New York, in its special products sales department prior to going with Wyandotte. Having joined the firm in 1948, he assisted the export manager, becoming manager of the department on January 1, 1950. Mr. Rigger is a member of Sigma Xi, Princeton Clubs of New York and Michigan and the American Chemical Society.

Will Acquires Callahan

Will Corp., Rochester, N. Y., laboratory equipment and supplies, has acquired its fifth division, with the recent purchase of the business of E. J. Callahan & Co., Baltimore, Md., and will operate it under the corporate name of Will Corporation of Md.

May Ban Akron Soap

Whether or not Akron Soap Co. will be permitted to continue in business at Cuyahoga Street in Akron, O., is to be decided shortly by the City Council. Earlier the Council ruled that the company must move by the end of the year. The Council ordered the firm to stop operations because of alleged violations of the city's zoning ordinance. Residents had complained about odors and fumes, and in July the ruling was made by the Council. The matter is now undergoing reconsideration by the City Council.

In March a fire destroyed the second story of the 46-year-old company's plant, and residents objected to rebuilding the factory.

A decision by the City Council is expected at any time.

The company plans a court fight on the action of the City Council.

Kramer Joins Lotte

Lotte Chemical Co., Paterson, N. J., recently announced the appointment of William J. Kramer as vice-president in charge of sales. Previously he was vice-president and general manager of Philipp Brothers Chemicals, Inc., New York. During his 25 years association with the chemical industry Mr. Kramer also has held executive positions with General Chemical Co., division of Allied Chemical & Dye Corp., and American Agricultural Chemical Co., both New York.

Magnus Hoover Plan Aide

Percy C. Magnus, president of Magnus, Mabee & Reynard, Inc., New York, was appointed recently as chairman of the Essential Oils and Related Groups for the Greater New York Citizens Committee for the Hoover Report. In this office he is enlisting support to further the educational program for adoption of the recommendations of the bipartisan Hoover Commission for reorganization of the executive branch of the Government.

P. C. MAGNUS

Monsanto Advances Loeffler

Alfred T. Loeffler, general manager of the company's New York of-

ALFRED T. LOEFFLER

fice since 1939, was recently named director of development for the organic chemicals division of Monsanto Chemical Co., St. Louis. He succeeds L. A. Watt, who becomes special assistant to the general manager of the division. Appointed as new branch manager in New York is William M. Russell, who holds a similar position in the Chicago office.

Mr. Loeffler joined Monsanto as assistant branch manager of the New York office in 1937. A native of Oswego, N. Y., he received his B.S. degree in chemistry in 1926 from the University of Rochester. He recently completed the Advanced Management Program at Harvard University's Graduate School of Business Administration. Since 1946 Monsanto has awarded selected executives leaves of absence to attend the course. Mr. Loeffler is a past president of the Salesmen's Association of the American Chemical Industry (1949), and is currently chairman of the International Commercial Relations Committee of the Synthetic Organic Chemical Manufacturers Association.

The new New York branch manager, William M. Russell has been with Monsanto since 1937, and in charge of the Chicago office since 1949. He is replaced by Forrest M. Luckett, Detroit manager. All appointments are effective January 1, 1951.

MAYPON • MAYPON • MAYPON • MAYPON • MAYPON

for sudsing and deterging purposes...

MAYPON SUPER K
and
MAYPON K
for
Household
and
Industry

USE...
MAYPON
PROTEIN—FATTY ACID—CONDENSATION PRODUCT

MAYPON 4C
for
Cosmetics

produced ONLY by
MAYWOOD CHEMICAL WORKS
MAYWOOD, N. J.

Samples
and
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July Soap Fat Use Down

Consumption of primary animal and vegetable fats and oils in soap declined in July, as compared with June, according to figures released recently by the Bureau of the Census of the U. S. Department of Commerce. The reported total for July was 97,059,000 pounds, as against 125,190,000 pounds in the previous month. Most significant changes were in the use of inedible and inedible refined tallows, grease and crude and refined coconut oil which was lower in July. The figures for the more important fats and oils reported consumed in soap are listed below in thousands of pounds:

Materials	*Pounds*
Inedible Tallow	40,302
Inedible Refined Tallow	14,463
Grease	17,160
Coconut oil, crude	8,129
Coconut oil, refined	5,384
Other vegetable oil, refined	1,937
Soybean oil, crude	104
Olive oil, sulfur foots	380
Olive oil, inedible	50
Corn oil, refined	28
Castor oil, No. 3, crude	29
Castor oil, No. 1, crude	25

P & G Earnings Up, Sales Off

Although its net sales declined for the fiscal year ended June 30, 1950, as compared with the previous year, its net profit was considerably above that for the previous year, Procter & Gamble Co., Cincinnati, reported recently. On net sales of $623,886,270 for the fiscal year just ended, the firm had a net profit of $61,092,079, as compared with sales of $696,670,926 and a net income of $28,655,481 for 1949.

Durrer Back from Europe

Ernest R. Durrer, executive vice-president of Givaudan-Delawanna, Inc., New York, recently returned from a 10-week trip to Europe, during which he traveled in Switzerland, France, Germany and Italy. While abroad he discussed the raw material supply picture with Givaudan associates.

Canco Post to Staley

A. C. Staley, Jr., assistant general manager of sales for American Can Co., New York was recently appointed manager of sales for the company's Pacific division, succeeding Dr. R. H. Lueck, who has been named general manager of research with headquarters in New York.

A. C. STALEY, Jr.

Chartered to Sell Soap

Dermateen Co., Sanford, N. C., was recently chartered by R. O. and Francis Humphrey and Charles Hall, all of Sanford, to sell skin soap and other products.

Fitch Sues to End Trust

Fred W. Fitch, founder of the shampoo and toiletries firm bearing his name, recently filed suit to terminate a trust he had set up in 1926 to control his properties for the benefit of his heirs. His sons, Gail and Lucius, and his sons-in-law, L. W. Sandahl and Richard Young, defendants, were accused by Mr. Fitch of mismanagement. He further asked their removal as trustees of the Fitch trust estate, and requested appointment of a competent trust company to succeed them.

The Fitch petition said that the bulk of the assets of his original firm, F. W. Fitch Co., and F. W. Fitch Manufacturing Co., Des Moines, Ia., were sold in 1949 to Grove Laboratories, St. Louis. He charged the sale price was less than the book value, but that he consented to it only as an alternative to financial failure. At the time of sale, Lucius Fitch was president of the company and the other defendants were officers.

Bon Ami Earnings Off

Bon Ami Co., New York, and subsidiaries reported recently a net profit of $119,368, equal to $1.26 payable on Class A shares for the six months ended June 30, 1950, as against net earnings of $200,242 and $2.00 on a Class A share in the comparable period a year ago. Gross profit from sales was $988,179 this year, and $1,226,163 in 1949.

C-P-P Expands on Coast

The west coast manufacturing plant of Colgate-Palmolive-Peet Co., Jersey City, N. J., at 7th and Carlton Streets, Berkeley, Calif., is now being modernized and expanded, it was learned recently. A new plant for the manufacture of "Vel" and "Fab" synthetic detergents, a new office building, and toilet article plant, as well as a dispensary building and an extension to the toilet article warehouse have already been completed.

Salesmen's Show Oct. 24

The annual show of the Salesmen's Association of the American Chemical Industry will be held Tuesday evening of Oct. 24, at the Hotel Roosevelt, New York. The show will be put on by members of the association.

Packaging Forum Oct. 23-25

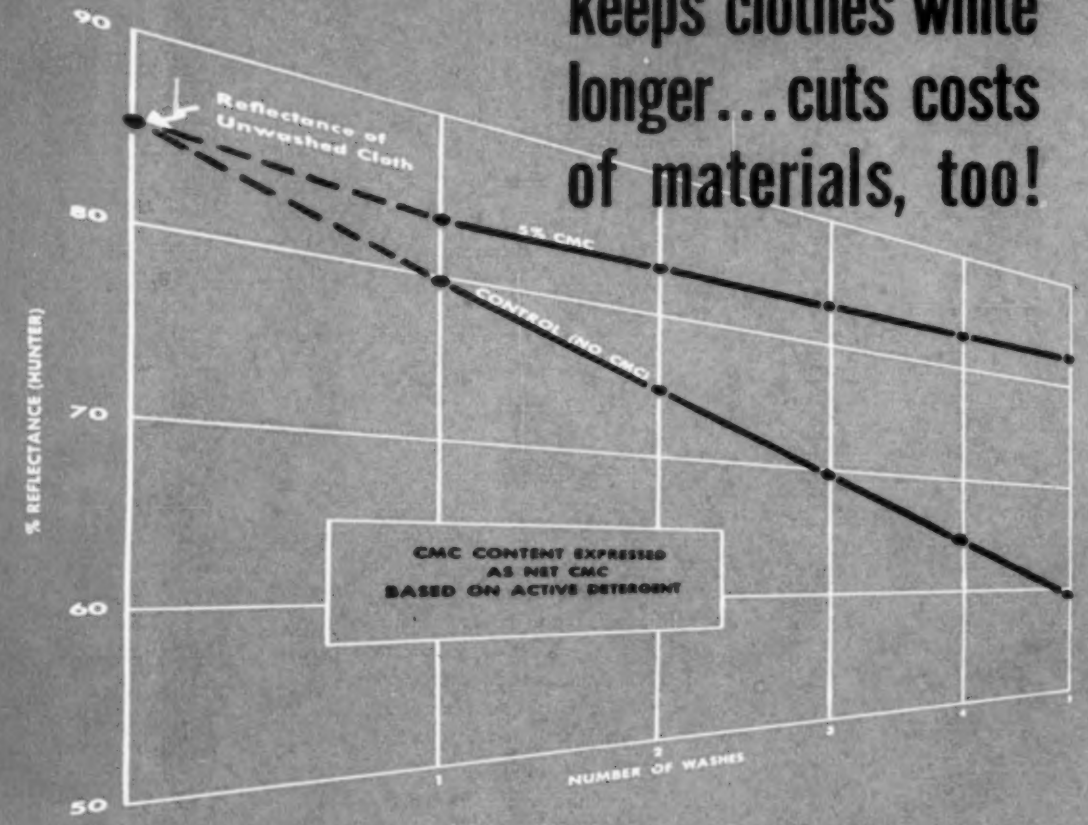
E. H. Balkema, in charge of printing for Colgate-Palmolive-Peet Co., Jersey City, N. J., is chairman of the program committee for the Twelfth Annual Forum of the Packaging Institute to be held Oct. 23-25, at the Hotel Commodore, New York. In addition to a discussion of advances in packaging science and technology, the program will also include a discussion on the outlook for packaging materials. A panel dealing with package printing and the reproduction of art work on packages is also scheduled with Mr. Balkema as one of the speakers.

The operation of packaging lines, and the problems pertaining to them will be discussed, with John A. Warren of American Home Products Co., New York, heading the panel.

Crude Technical CMC

HERCULES®

keeps clothes white longer... cuts costs of materials, too!



THIS chart proves that Hercules' "CT" grade of CMC, especially prepared for detergents, will do a better job for your laundry customers—*and at no extra cost to you!* This grade of CMC reduces the amount of active detergent needed and permits the generous addition of cheaper alkaline builders.

In this case, the 5% replacement of the active detergent content with "Hercules" CMC ("CT" grade) increases soil removal and whiteness retention properties almost 45% even after five washings. And this greater whiteness is increasingly noticeable with each washing. We will be glad to work with you in adapting CMC to your detergent needs. A purified grade of CMC (cellulose gum) is also available.

HERCULES POWDER COMPANY INCORPORATED *961 Market Street, Wilmington, Delaware*

CM50-5

List Newspaper Advertisers

Increasing its expenditure for newspaper advertising in 1949 by 51 per cent, Colgate-Palmolive-Peet Co., Jersey City, N. J., moved from third to second place, in terms of dollars spent in that year, as compared with the previous year, according to figures released recently by the Bureau of Advertising of the American Newspaper Publishers Association. Procter & Gamble Co., Cincinnati, dropped from second to fifth place, increasing its expenditure by 1.9 per cent for 1949 as compared with the previous year. Also losing ground, although increasing its budget, was Lever Brothers Co. New York, occupying sixth place.

The Colgate - Palmolive - Peet Co. 1949 expenditure for newspaper advertising was $12,089,890, as against $7,969,983 in the previous year. Procter & Gamble spent $8,535,-325 in '49, as compared with $8,373,-006 in '48. Lever Brothers were reported to have spent $8,047,565 in '49, as against $7,216,128 in the previous year.

Other soap and chemical specialty manufacturing firms whose newspaper expenditures for advertising in the two years were listed included: Swift & Co., 16th place, $3,397,211, '49, $2,091,574, '48; Armour & Co., 21st place, $2,814,009, '49, $1,472,-593 '48; American Home Products Corp., 24th place, $2,546,819 '49, $1,875,246 '48; Manhattan Soap Co., 45th place, $1,164,660 '49, $284,954 '48; Bristol-Myers Co., 63rd place, $939,910 '49, $365,469 '48; Cudahy Packing Co., 73rd place, $853,663 '49, $822,405 '48; S. C. Johnson & Son Co., 76th place, $800,849, '49, $416,-668 '48; Wilson & Co., 95th place, $630,517 '49, $808,060 '48.

Nopco Rushes Coast Plants

Expansion and refitting of two of its west coast plants for the production of industrial chemicals is going forward rapidly, with one of the factories expected to be in operation shortly after the first of next year, it was announced recently by Nopco Chemical Co., Harrison, N. J. Nopco's four-year-old plant on South 14th St. in Richmond, Calif., is being converted to the manufacture of stearates and palmitates by Metasap Chemical Co., a wholly owned subsidiary. Equipment is now being installed and the plant is expected to be in production by Jan. 1, 1951.

The other Nopco plant on South 10th St., also in Richmond, is being fitted for the production of the extensive line of chemical processing specialties marketed through the company's industrial department.

T.G.A. Section to Meet

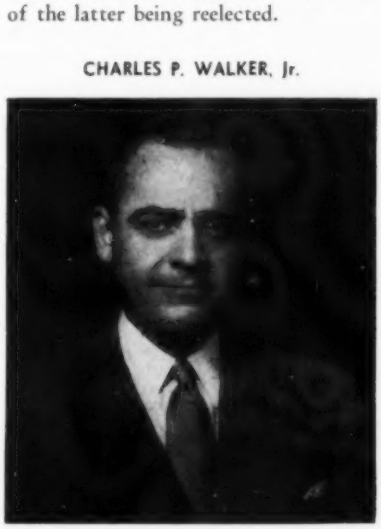
The next meeting of the Scientific Section of the Toilet Goods Association is scheduled to be held Wednesday, Dec. 6, at the Waldorf-Astoria Hotel, New York.

Walker DCAT Chairman

Charles P. Walker, Jr., director and general sales manager of Charles Pfizer & Co., Brooklyn, was elected chairman of the Drug, Chemical & Allied Trades Section of the New York Board of Trade at its 60th annual meeting, Sept. 21-23, at Shawnee Inn, Shawnee-on-Delaware, Pa. He succeeds Harold C. Green of L. Sonneborn Sons, Inc., New York, who was elected section representative on the New York Board of Trade.

New officers to serve for the coming year are: vice - chairman, Charles M. Macauley of Pro-phy-lactic Brush Co.; treasurer, Hugh S. Crosson, McKesson & Robbins, Inc.; and Miss Helen Booth, secretary, both of the latter being reelected.

CHARLES P. WALKER, Jr.



Solvay, Other Strikes End

Production of soda ash, caustic soda and related industrial chemicals by major producers is expected to get under way shortly. The 102-day-old strike at the Solvay, Syracuse plant of Solvay Process Division of Allied Chemical and Dye Corp., New York, was ended late in September. At the Solvay, Detroit plant, voting on ratification of terms of the strike settlement was to take place Oct. 5. At the Solvay, Baton Rouge, La., plant, work is continuing while contract terms are under negotiation.

The strike at the alkali plant of Wyandotte Chemicals Corp., Wyandotte, Mich., was settled in one week, and the 66-day-old strike of Diamond Alkali was settled late in September.

When maintenance workers walked off their jobs at the alkali plants, materials remained in pipelines and "froze" there. This is causing a five to six-week delay in resuming production in some units to put plants back into operating condition. In cases where the strike was of long duration some workers have failed to return to their jobs, having found work elsewhere in the interim.

Olney Award to Royer

Dr. G. L. Royer of Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., was to receive the annual Olney Award Medal of the American Association of Textile Chemists and Colorists at the group's 29th annual meeting, Sept. 30, at Wentworth-by-the-Sea, Portsmouth, N. H.

Cos. Chems. Hear Sagarin

Edward Sagarin, advertising and publicity manager of Givaudan-Delawanna, Inc., New York, was to speak on the subject of "Progress and Problems in the Science of Odor" at the Oct. 10, dinner meeting of the Chicago Chapter of the Society of Cosmetic Chemists, held at Henrici's Restaurant in the Merchandise Mart. Mr. Sagarin is editor of the *Givaudian* house magazine and author of the book, "The Science and Art of Perfumery."

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RAW MATERIAL MARKETS

As of Oct. 2, 1950

FATS and oils prices have receded somewhat from the highs to which they had risen suddenly early in September. The signing of the law establishing controls and the prospects of a long war in Korea set off a wave of heavy buying that pushed prices of fats and oils to their highest levels since the days immediately following the decontrol of prices shortly after the end of World War II. The easing off in prices is attributed largely to the successes of U.N. forces in Korea and the end of the wave of heavy buying. Whether the present recession in prices is temporary is a speculative question, particularly since the forces of inflation already are at work pushing prices of chemicals and other materials higher and higher.

The end of the strikes in the alkali industry was one of the happier developments of the month, since stocks were perilously low in most cases. However, it will be some time before production is resumed on anything approaching a normal basis since pipelines in most plants have to be cleaned of frozen caustic before operations can begin.

Tallow prices, which jumped spectacularly 3¼ cents in one day during early September to 13¾ cents for the fancy grade, softened to 13¼ cents in recent days and have remained at that level for a week or more. The price of 88 per cent tallow chip soap was recently quoted at 18 cents, having gone from 11½ cents a pound in two months to the day. With abundant supplies of tallow forecast for the coming year, it is difficult to understand why prices have advanced so sharply. Heavy demand and sympathy with the upward movement of other fats and oils is one explanation.

Coconut oil felt the price pressure, too, in recent days and advanced to 18 cents a pound, crude basis, Pacific Coast. The current quotation is 15¾ cents. Copra has slipped back from $240 a ton to $195.

Other oils, the prices of which changed in the past few days include cottonseed oil, which had touched 19½ cents a pound and is now listed at 16½ cents. Two days earlier it was down to 16 cents. Corn oil fell back similarly from 19 cents to its present figure of 16½ cents. Soybean oil, up a half cent per pound presently to 14 cents, is down two cents as compared with the early September price. Peanut oil, having gone as high as 21¼ cents a pound, has slipped back to 19 cents. Lard is now bringing 12¾ cents a pound, as against 14¾ cents just a little under one month ago.

A further advance in the price of glycerine, which is continuing in very short supply, has been reported. A five cent increase brings the price of the refined to 44¼ cents a pound in tanks and 44¾ cents in carlots. The earlier prices were 39¼ and 39¾ for tanks and carlots, respectively. Sales of soap lye glycerine have been reported at 50 to 55 cents per pound. A report that Russia would sell the U. S. 1,000 tons of glycerine for October shipment was noted recently by the *Journal of Commerce*. Reports have also been heard that in view of the current situation on glycerine, Shell Chemical Corp. is considering expanding its facilities for the production of synthetic glycerine. At present the company operates an $8,000,000 plant in Houston, Tex., for manufacturing the synthetic.

Crude naphthalene prices advanced one cent a pound, effective Oct. 1. The crude, 74 degree product is now quoted at 5¼ cents.

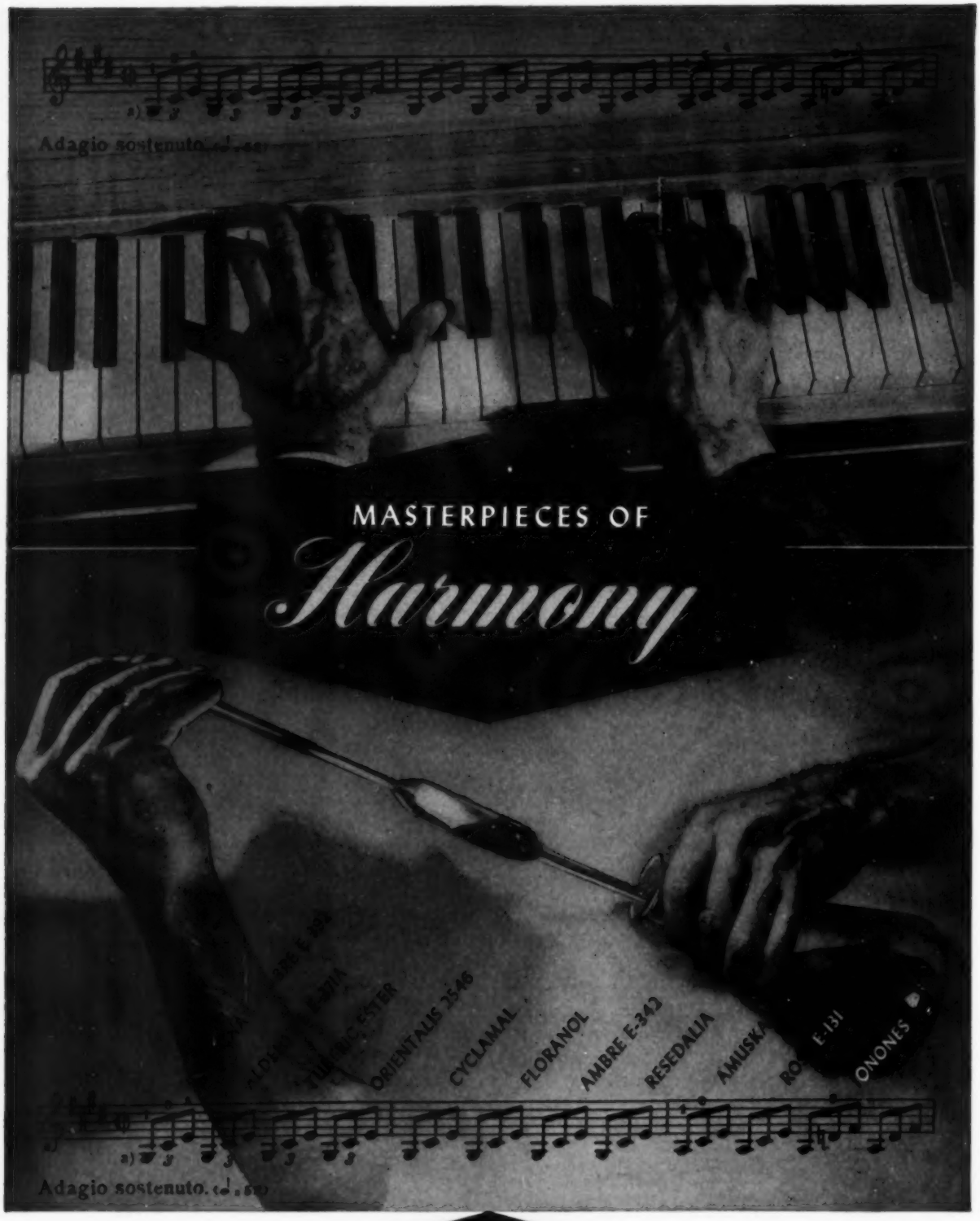
Price increases also were reported recently on white and orange shellac in liquid form. The new gallon price on the white four pound cut is $2.55, up from $2.40, while the orange on the same basis is now $2.40, as against $2.20 previously.

Wax price changes recorded during the month affected three grades of carnauba: No. 1 Yellow, now $1.05 was $1.09; No. 3, North Country, at 78 cents has dropped five cents; refined is 84 cents, having formerly been 86 cents. Ouricury is down to 78 cents from 80 and the refined grade is off three cents, now quoted at 82.

Essential oil prices are tending up in the face of present uncertainties, militarily and politically. In a recently issued special report on essential oil and aromatic chemicals, Schimmel & Co., New York, pointed out that a firm price trend applies to all essential oils. "Prices of certain critical items have recently registered further sharp increases and others, still in relatively good supply have followed the rising price trend," according to the report. It further states that: "Among items produced from domestic raw materials some shortages also have occurred, due almost wholly to heavy forward buying. Barring further deterioration of the political situation and consequent restrictions on production, there seems to be no reason to fear permanent shortages in these materials. On the other hand it should be noted that price increases which have been made up to the present are the result of increased raw material and operating costs. A later downward revision is therefore unlikely."

CD&CA Meets Oct. 27

The next regular dinner meeting of the Cincinnati Drug & Chemical Association will be held, Friday, Oct. 27, at 6:00 p.m. at the University Club in Cincinnati. Dr. Paul Herget, nationally known astronomer will discuss "Interesting Features of Astronomy."



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BIDS AND AWARDS

G.P.O. Liquid Soap Bids

Bids on 75 drums of 4,125 gallons of liquid soap for toilet use in 55 gallon drums in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., were received from: Peck's Products Co., St. Louis, 42 cents a gallon; Chemical Manufacturing & Distributing Co., Easton, Pa., 38 cents; Harley Soap Co., Philadelphia, 37 cents; Lanaire Chemical Corp., Chicago, 59 cents; Crystal Soap & Chemical Co., Philadelphia, 35.8 cents; Trio Chemical Works, Brooklyn, 41.4 cents; Peerless Chemical Co., Philadelphia, 47.5 cents; Davies-Young Soap Co., Dayton, O., 64 cents; National Laboratories, Washington, D. C., 39 cents; Phipps Products Corp., Boston, $1.1645; Bri-Test, Inc., New York, 34.8 cents.

USDA Pyrethrum Award

McLaughlin Gormley King Co., Minneapolis, received the award on an unspecified quantity of pyrethrum extract with a bid of $10.25 in a recent opening for miscellaneous supplies by the U. S. Department of Agriculture.

Soap Award to Kamen

Kamen Soap Products Co., New York, received the award on 735,000 bars of toilet, soft, hard or sea water soap, in a recent opening for miscellaneous supplies by the Army Quartermaster Corps, Chicago. The Kamen bid was 3.69 cents per bar for a total of $27,121.50.

AQM Scouring Soap Awards

Awards on various items of a recent opening for mechanics hand scouring soap by the Army Quartermaster Corp., New York, went to the following: Sugar Beet Products Co., Saginaw, Mich., 10.05 cents a pound for a total of $27,984.53; Continental Soap Co., Chicago, 10.09 cents, 9.77 cents, 10.93 cents, 10.33 cents, 10.21 cents for a total of $24,383.74; Chemical Manufacturing & Distributing Co., Easton, Pa., 12.01 cents, total of $4,767.97.

FSS Polish Award to Trio

Trio Chemical Works, Brooklyn, received the award on metal polish in a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C., with a bid of 10.5 cents.

F.S.S. Soap Awards

In recent openings for miscellaneous supplies by the Federal Supply Service, Washington, D. C., the following awards were announced: Soap, item 51-S-1678, Procter & Gamble Distributing Co., Cincinnati, 11.52 cents; soap, item 51-S-1430, Hershey Estates Soap Division, Hershey, Pa., 9.75 cents; compound for use in mechanical dishwashing machines, item 51-C-1576, Washington Chemical Sales, Washington, D. C., 9.5 cents, 1576-15, 10.75 cents, item 51-C-1576-15, Turco Products, Inc., Los Angeles, 11.15 cents Cleveland, 9.95 cents Chicago, 12.39 cents Denver, 14.19 cents Seattle and 11.37 cents Los Angeles.

A.F. Cleaning Comp. Bids

The following bids were received on 1,518,600 pounds of cleaning compound in a recent opening for miscellaneous supplies by the Wright-Patterson Air Base, Dayton, O.: Spazier Soap & Chemical Co., Santa Monica, Calif., 8.9 cents; Turco Products, Inc., Los Angeles, 8.2 cents Houston, 7.57 cents Los Angeles, 7.47 cents Chicago; Kelite Products, Inc., Los Angeles, Sacramento, Los Angeles and Mesite, as required per hundred weight, 10.35 cents, 128,400 pounds for Sacramento Air Material Command, 10.35 cents, 182,600 pounds Los Angeles; Phipps Products Corp., Boston, 9.57 cents; Kelite Products, Inc., Mineola, N. Y., 12.75 cents for 321,000 pounds; Jones Hamilton Co., Oakland, Calif., 8.09 cents on 449,00 pounds; Continental Chemical Co., Sacramento, 7.35 cents on 192,000 pounds and Virginia-Carolina Chemical Co., Richmond, 8.05 cents on 120,000 pounds.

A.F. Spray Wax Bids

Bids on 7,758 gallons of spray wax in a recent opening for miscellaneous supplies by the Wright-Patterson Air Base, Dayton, O., were submitted by R. M. Hollingshead Co., Camden, N. J., 98 cents; Windsor Wax Co., Hoboken, N. J., $1.41; Clinton Spray Wax Co., Milwaukee, $2.47, and Wingwax Co., Dayton, O., $2.70.

FSS Soap Awards

In a recent opening for miscellaneous supplies by the Federal Supply Service, Washington, D. C., the following awards on laundry chip soaps, etc, were announced:

Item 51-S-1430, Armour & Co., Chicago, 9.35c New York, 9.62c Washington, item 1655, 5.8c New York, 6c Washington, 7.1c Cleveland, 7.3c East Point, Ga.; General Soap Co., Chicago, item 51-S-1674-10, 14c Washington, 12.8c Chicago, 13.88c East Point and 16c Seattle, item 1675, 14.45c Seattle, item 1750, 4.97c Cleveland and 7.45c Los Angeles, item 1755, 4.25c Chicago, 6.23c Denver, item 1900, 17.73c Boston, 17.67c Washington, 16.97c Cleveland, 16.25c Chicago, item 1910, 17.23c Boston, 17.17c Washington, 15.75 Chicago, 18.95c Seattle; Procter & Gamble Distributing Co., Cincinnati, item 51-S-1430, 9.86c San Francisco, item 1678, 10.57c New York, 10.97c Cleveland and 10.35c Washington; Lee Soap Co., Denver, item 51-S-1430, $10.375 cwt Denver; Stevens Soap Corp., Brooklyn, item 51-S-1730, 5c New York, item 1750, 4.3c New York, 4.4c Washington, item 17.55, 4c Washington, D. C.; Pioneer Soap Co., San Francisco, item 51-S-1674-10, 15c San Francisco, item 1675, 13.5c San Francisco; Iowa Soap Co., Burlington, Ia., item 51-S-1920, 18c Boston and Washington, 20c Seattle; Stahl Soap Corp., Long Island City, N. Y., item 51-S-1885, 12.97c Boston, New York and Cleveland, 14c Chicago and 11.97c Washington, item 1934, 20c Washington, 21c Chicago.

C-P-P Earnings Up in Half

For the six months ended June 30, 1950, Colgate-Palmolive-Peet Co., Jersey City, N. J., had a net income of $5,618,886, equal to $2.70 a share on domestic sales of $95,087,168, as against $5,298,464 or $2.54 per common share on sales of $103,640,582 in the comparable period in 1949, it reported recently. Total sales were $139,643,672 in 1950's first six months, as against $146,865,895 last year.

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NEW TRADE MARKS

THE following trade-marks were published in the September issues of the *Official Gazette* of the United States Patent office in compliance with Section 6 of the Act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, a fee of ten dollars must accompany each notice of opposition.

Adoration—This for toilet soap. Filed Dec. 13, 1946 by Soap Craft, Inc., Chicago. Claims use since Nov. 26, 1946.

The following trade marks are published in compliance with section 13 (a) of the Trade Mark Act of 1946. Notice of opposition must be filed within 30 days of publication and a fee of $25 must accompany each notice of opposition.

Johnson's Cleaner—This for household cleaner for rugs. Filed July 25, 1947 by Johnson Products Co., Buffalo. Claims use since Jan. 1, 1933.

Vicar Lite—This for liquid acid cleanser for use in dairies, building maintenance, etc. Filed May 29, 1948 by Virginia-Carolina Chemical Corp., Richmond, Va. Claims use since Apr. 17, 1948.

VAO—This for soap. Filed Jan. 25, 1949 by Marlowe Corp., Newark, N. J. Claims use since Feb., 1936.

Anolite—This for detergent soluble in organic solvents for use in dry cleaning textiles. Filed Mar. 5, 1949 by R. R. Street & Co., Chicago. Claims use since Aug. 16, 1948.

Westvaco—This for insecticides. Filed Oct. 17, 1947 by Food Machinery and Chemical Corp., New York. Claims use since Dec., 1926.

Tri-D-Septic—This for concentrate solution for use as a disinfectant for household and industrial use. Filed Nov. 24, 1948 by William Getz Corp., Chicago. Claims use since Nov. 9, 1948.

Lite Aire—This for liquid spray to be used as a room deodorant. Filed Jan. 12, 1949 by Perma Sheen Chemical Co., Washington, Pa. Claims use since Jan. 1, 1949.

Lyndis—This for disinfectant. Filed Nov. 3, 1949 by Lynwood Co., Chicago. Claims use since Aug. 2, 1949.

Flemings—This for lice powder. Filed Dec. 27, 1948 by Fleming Brothers, Chicago. Claims use since Nov. 9, 1914.

Hydrolyptol—This for antiseptic solution. Filed July 15, 1949 by R. C. Hood, Atlanta, Ga. Claims use since Oct. 1, 1897.

Red Dot—This for ammoniated tooth paste. Filed June 15, 1949 by Dental Pharmaceutical Corp. of America, Chicago. Claims use since Feb. 17, 1949.

Enchanted Evening—This for bubble bath. Filed Aug. 27, 1949 by Duke & Benedict, New York. Claims use since June 1, 1949.

Neleco—This for synthetic detergent for washing automobiles and trucks. Filed Feb. 8, 1949 by Neleco Products, Inc., Malden, Mass. Claims use since June, 1947.

Gamophen—This for antiseptic soap. Filed Apr. 16. 1949 by Johnson & Johnson, New Brunswick, N. J. Claims use since May 2, 1947.

PM—This for soap and cleaner. Filed Apr. 19, 1949 by Essential Chemicals Co., Milwaukee. Claims use since Mar. 3, 1948.

Rush—This for cleaning liquid for use on painted walls, upholstery, linoleum, nickel and chrome. Filed June 18, 1949 by Rush Products Co., Los Angeles. Claims use since Feb. 15, 1949.

Plasticized—This for polishing preparations for automobiles, furniture, etc. Filed Aug. 2. 1949 by Plasticize Co., New York. Claims use since July 11, 1949.

Merthan 642—This for insecticides and fungicides. Filed Feb. 17, 1949 by Central Chemical Corp., Hagerstown, Md. Claims use since Dec. 20, 1948.

Para-Bullets—This for insecticide and moth repellent. Filed Mar. 23. 1949 by Standard Chlorine Chemical Co., S. Kearny, N. J. Claims use since Feb. 24, 1949.

HGI—This for gamma isomers of benzene hexachloride. Filed Aug. 15, 1949 by Hooker Electrochemical Co., Niagara Falls, N. Y. Claims use since Aug. 18, 1947.

Hooker—This for paradichlorobenzene. Filed Aug. 22, 1949 by Hooker Electrochemical Co., Niagara Falls, N. Y. Claims use since Nov., 1909.

Big Stinky—This for insect baits and insecticides. Filed Oct. 26, 1949 by William E. Brown, Pewaukee, Wis. Claims use since Sept. 18, 1949.

Irolene—This for deodorants. Filed July 29. 1949 by Y & Y Deodorizer Co., Philadelphia. Claims use since Jan. 23, 1899.

Multi Clean—This for floor cleaning compound. Filed May 17, 1948 by Multi-Clean Products, Inc., St. Paul, Minn. Claims use since May, 1946.

Auditorium Bath—This for soap. Filed Nov. 19, 1948 by Armour and Co., Chicago. Claims use since May 28, 1908.

Toi Kleen—This for solvent for cleaning toilet bowls. Filed June 27, 1949 by Western Chemical Co., Kansas City, Mo. Claims use since June 15, 1928.

Windowlite—This for preparation for cleaning and polishing glass, nickel, chrome, other metal, enamel and tile surfaces. Filed Sept. 9, 1948 by G. E. Palmer Co., Detroit. Claims use since Sept. 6, 1939.

Steel-Co-Lite—This for cleansing powder for cleaning and polishing stainless steel and other metal surfaces. Filed Nov. 19, 1948 by C. C. Manufacturing Co., Chicago. Claims use since Feb. 5, 1948.

R-M—This for combined polish and cleaner. Filed Dec. 27, 1948 by Rinshed-Mason Co., Detroit. Claims use since Feb., 1945.

Neutra-Gloss—This for liquid floor wax. Filed Aug. 23, 1949 by Du Bois Co., Cincinnati. Claims use since May 24, 1932.

Packard—This for anti-freeze solution for windshield washing compound. Filed Dec. 7, 1948 by Packard Motor Car Co., Detroit. Claims use since 1932.

Clenesco—This for bactericides. Filed Dec. 27, 1948 by Cowles Chemical Co., Cleveland. Claims use since Jan. 7, 1946.

PermaGard—This for wood preservative. Filed Jan. 21, 1949 by Thompson-Hayward Chemical Co., Kansas City, Mo. Claims use since Oct. 18, 1946.

Corothion—This for insecticide. Filed Nov. 26, 1949 by Pittsburgh Plate Glass Co., Pittsburgh. Claims use since May 4, 1949.

Dilan—This for insecticides. Filed Nov. 30, 1949 by Commercial Solvents Corp., New York. Claims use since Oct. 10, 1949.

Manchester—This for floor waxes. Filed Feb. 25, 1948 by Davis Paint Co., Kansas City, Mo. Claims use since Oct. 18, 1934.

Mrs. Lane's—This for floor wax. Filed Mar. 26, 1948 by Clover Farm Stores Corp., Cleveland. Claims use since Nov. 1, 1935.

Car-Na-Var—This for floor filler and finish. Filed Mar. 10, 1949 by Continental Car-Na-Var Corp., Brazil, Ind. Claims use since Jan 1, 1926.

Ammifrice—This for dentifrice. Filed Sept. 27, 1949 by Stevens-Wiley Manufacturing Co., Philadelphia. Claims use since May, 1949.

Practical Pak—This for detergents for washing machines. Filed May 3, 1948 by Lowell L. Haines, San Francisco. Claims use since Mar. 1, 1948.

Mexo—This for powdered soaps for use in soap dispensers. Filed Nov. 4, 1948 by Rochester Germicide Co., Rochester, N. Y. Claims use since

(*Turn to Page* 141)

Machines Are As Important As Compounding!

For every operation in

Soap Making

For continuous mixing, milling, plodding, cutting, pressing and wrapping every kind of soap.

A. Amalgamator

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PRODUCTION SECTION

Making Transparent Soap

Transparent soap, produced formerly by dissolving soap in alcohol and allowing to solidify, can also be made without alcohol by using substances that prevent soap crystallization: glycerine, sugar, etc.

TRANSPARENT glycerine soaps were produced formerly by dissolving soap in alcohol and allowing the solution to solidify. A less viscous soap, which is more malleable and firm than the normal soda soap, results from this method. Transparency is effected by a change in the soap alcohol solution. Hydrolysis, which is responsible for opaqueness, decreases, free fatty acids are eliminated, and fatty acid salts are reformed. The transparent aqueous alcoholic solution can be formed in the soap complex only if the amount of water in the soap is larger than the quantity required for the formation of a hydrocolloid.

Alcohol functions in a manner similar to electrolytes. Both reduce hydrolysis and form a kind of cellular tissue in the soap; however, it is not possible to salt out soap with alcohol, though it may be done with electrolytes. (NaOH, NaCl, KCl).

Transparent soaps may be manufactured without alcohol when using substances which prevent crystallization of the soap. Suitable compounds are glycerine, sugar, as well as solutions of crystal soda, potassium chloride, potassium nitrate, potash, etc. The fats selected for the soap play an important part in the quality of the transparent soap made. Soaps made from lower fatty acids (especially coconut oil and palm kernel oil) show better transparency than soaps made from higher fatty acids. Although the sodium salts of a mixture of fatty acids possess the lowest transparent properties, sodium hydroxide is usually used for saponification because of the easily obtainable hardness of soap. A moderate excess of free alkali favors a transparent soap; when there is no such excess, the soap often becomes cloudy.

One of the more important factors to consider in manufacturing soaps, is the effect of soap on the skin. Palm kernel oil and coconut oil, although seemingly desirable to use in producing transparent soaps, are irritating to the skin because of their low fatty acid content. Higher fatty acids are less irritating, making it desirable to arrange the fat mixture to reduce the possibility of irritation. Formulation with castor oil is one means of handling the problem.

There is a tendency for some manufacturers to try to reduce the cost of expensive alcohols by making transparent soaps using soda. Such a method results in soaps with a soda content of two to three per cent, which is irritating and not desirable for toilet products.

Some manufacturing conditions favorable to the production of a good transparent soap are summarized as follows: (1) use of clear and purified fats, or if using fatty acids, the use of distilled products; (2) saponification only with clear lye; (3) use of distilled water for diluting the lye, or for dissolving the salts and eventually correcting the soaps; (4) use of salt and sugar solutions which were prepared the previous day, so that they may have clarified; (5) tinting and perfuming with alkali-proof raw materials. Essences such as cassia oil, red thymian oil and clove oil, Peru balsam and some others should be rejected; (6) accurate weighing of fats and other raw materials to reduce the need for corrections.

In manufacturing transparent soaps, the fats are melted in a steam jacketed boiler, strained and returned to the cleaned boiler. The mixture, consisting of 45 Kg. of cochin coconut oil, and 65 Kg. of purified tallow, is heated to 70° C. To the fats, 45 Kg. of caustic soda, 18° Bé and 18 Kg. of glycerine, 28° Bé, are added slowly with stirring. Two to three kilograms of alcohol are added to encourage saponification.

Steam is admitted into the jacket, and the mixture heated until the mass starts boiling at the sides of the boiler. At this point, the steam is shut off, and stirring continued as the contents of the boiler rise. Then steam is again admitted to the boiler, stirring resumed, until the soap mixture again rises. Steam admission and stirring are then discontinued, to be resumed after a few minutes. When the soap is well bound, it is left to stand for one-half to one hour in a closed boiler to complete saponification. During this time, it should be stirred repeatedly. The soap is tested for alkalinity with phenolphthalein, and corrected if necessary. If alkalinity is

"high-white"

carbose

CARBOSE* D is a technical grade of Sodium CMC developed by Wyandotte specifically for use as a detergency promoter with built detergent systems — for higher whiteness retention and greater soil removal.

Aside from its detergency promoting properties, the low viscosity of Carbose D makes it especially suitable for use in cleaning compounds. It dissolves more quickly . . . permits the use of higher concentrations in solution.

"High-white" Carbose D is more than a builder. If a given amount of detergent is partially replaced with a builder, the detergency generally decreases. But if it is replaced with Carbose D, the detergency generally increases — frequently to an amazing degree. As little as 1% of "high-white" Carbose D added to a synthetic detergent can increase soil removal and whiteness retention properties by 20 to 80%.

Write for samples and further information.

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CALCIUM CARBONATE • CALCIUM CHLORIDE
CHLORINE • HYDROGEN • DRY ICE
SYNTHETIC DETERGENTS • GLYCOLS
CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE
PROPYLENE DICHLORIDE
AROMATIC SULFONIC ACID DERIVATIVES
OTHER ORGANIC AND INORGANIC CHEMICALS

Wyandotte
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satisfactory, and saponification completed, 42 to 43 Kg. of alcohol are added, the mass mixed well, and left to stand 20 to 30 minutes in a closed container.

Soap samples taken with an iron trowel are put on a glass plate and allowed to cool and harden. Samples are examined for transparency. If the sample is clear, it is tested with phenolphthalein, which gives a pink tint. If the sample is cloudy and weak, it is an indication of insufficient lye. If cloudy but hard, insufficient water is indicated. In the first case, lye is combined with alcohol and added to the mass to correct the conditions. It is necessary to add alcohol with the lye, to prevent the formation of flocs in the soap. The mass is stirred well and the boiler shut again for about ten minutes. In the second case, water is added with alcohol, and the whole mixed well. If the sample is very cloudy, it might be corrected by adding some hot coconut oil and allowing the soap to stand for some time. It is not advisable to reheat the soap after alcohol has been added, since part of the alcohol may evaporate. After sugar has been added to the solution, heating is inadvisable since it may cause discoloration.

If the soap is satisfactory, perfume and dyes are mixed with alcohol, and added to the batch, the mixture is poured into small forms, and cooled down as thoroughly as possible. Aging for two to three weeks before cutting improves the transparency of the product.

A milled transparent soap, described in a German patent, is based on 61 Kg. tallow, 18 Kg. coconut oil, 11 Kg. castor oil, and 10 Kg. of rosin, saponified with 45.8 Kg. of purified caustic soda, 49° Bé. The hot transparent soap is poured onto cooling rolls which reduce the temperature from 90 to 20° in a few minutes. The ribbons are perfumed and milled a couple of times on cold rollers, and pressed in a slow operating plodder. The cakes dry without alteration and show a fat content of 73/75 per cent. *Alchimist* 4, No. 7, 143-145 and 4, No. 8, 167-173 (1950).

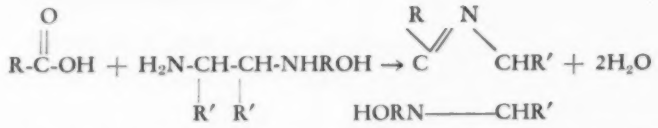
Solvent Cleaning of Pans

A small silicone-converting tank, using SC solvent, is designed to remove glaze from all types of bakery utensils at about 125°F. The solvent is water stabilized, does not leave a powdery residue, and does not attack tinned or aluminum vessels. *Detrex Bulletin* Aug. (1950).

Cationics as Softeners

Cationics as textile softeners show an affinity for the fabric and impart considerable wash resistance as compared with some of the older type products, such as sulfonated tallow, fatty emulsions, etc. One type of cationic, based on fats, is prepared by reacting fatty acids with ammonia at high temperatures, and then hydrogenating. This reaction yields a primary amino group, which tends toward oxidation and discoloration. However, conversion to a tertiary amino group will avoid this problem.

Condensation of fatty acids with hydroxyalkyl alkylenepolyamides yields the substituted glyoxalidines:



The above product is also a tertiary amine and may be used as such, or it may be reacted with alkylating agents, such as methyl chloride, to produce a quaternary cationic. *Rayon & Synthetic Textiles* 31, No. 8, 73-75 (1950).

Safrole in Soap

A method for determining safrole in soaps is based on the solution of the soap in aqueous alcohol, and precipitation of the soap as nitrates by the addition of silver nitrate. The mixture is then steam distilled, and conditions controlled so that the safrole containing distillate has a 9.5 per cent cent alcohol content. The safrole is determined by comparing the ultraviolet light absorption of the sample, using a Beckman D.U. spectrophotometer, calibrated against known amounts of safrole in 9.5 per cent alcohol base. Reproducibility of results for samples containing .1 per cent safrole is within ± 6 per cent. Ishler, Broker, Gorber, *Anal. Chem.* 22, 458 (1950).

Deodorant Soaps

Maximum efficiency of the hexachlorophene containing soaps can be maintained only if the soap is used to the exclusion of all other cleansing agents. Other detergents remove the protective antibacterial film deposited by the hexachlorophene, thereby causing a loss of the cumulative effect of the bactericide. On the basis of reports and data to date, the hexachlorophene may be considered non-irritating, for practical purposes, in the one to three per cent concentration commonly employed. It exhibits rapid antibacterial action on first exposure, cumulative action with repeated use, adsorption on the skin for several days, and maintenance of bactericidal activity when incorporated in soap. *J. A. M. A.* March 18, 1950.

Silicone-Soap Lubricants

Silicone greases have been found to perform satisfactorily with equipment employing sealed bearings and operating under wide temperature ranges. However, these greases lack resistance to shear. This problem is overcome by use of the special acid components of metal soaps. A typical formula for a product of this type is as follows: 12.8 per cent lithium soap; .9 per cent glycerine; 13.5 per cent mineral oil; and 72.9 per cent dimethyl silicone polymer. The metallic component of the soap may be sodium, calcium, barium, or aluminum. *Glycerine Facts, September* 1950.

Nonionic Detergents

Nonionic detergents favor the development of molds in a liquid medium, and with the exception of "Carbowax 1500," decrease the fungistatic effect of added antiseptics. *Manuf. Chem.* 21, No. 9, 388 (1950).

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Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. It is more economical to use, on the basis of both Na_2O (alkalinity) and SiO_2 (silicate) than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself. DRYMET contains no water of crystallization.

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Cowles DRYSEQ, anhydrous sodium sesquisilicate, is a medium pH alkaline cleaner which will do fast, dependable work at a low cost to the user. It is a white, free-flowing powder, quickly and completely soluble in hot or cold water—containing 56.75% Na_2O—making it an economical base material for compounding.

DRYORTH*

THE HEAVY-DUTY DETERGENT SILICATE

Cowles DRYORTH, anhydrous sodium orthosilicate, is a powerful, speedy, heavy-duty cleaner with valuable penetrating and wetting-out properties, reinforced dirt-removing power and unusual emulsifying action. It is an anyhdrous, free-flowing powdered silicate containing not less than 60% Na_2O, which may also be used as an economical constituent of high pH cleaning compounds.

We'll be glad to send you our DRYMET File Folder containing complete technical information and suggested formulations.

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THE MEDIUM pH DETERGENT SILICATE

Cowles CRYSTAMET is a pure, perfectly white, free-flowing granular pentahydrate sodium metasilicate with the normal 42% water of crystallization. Suggested for compounding when it is desirable to lower the concentration of a finished product. Readily soluble—chemically stable—easy to handle. Can be used on medium pH jobs.

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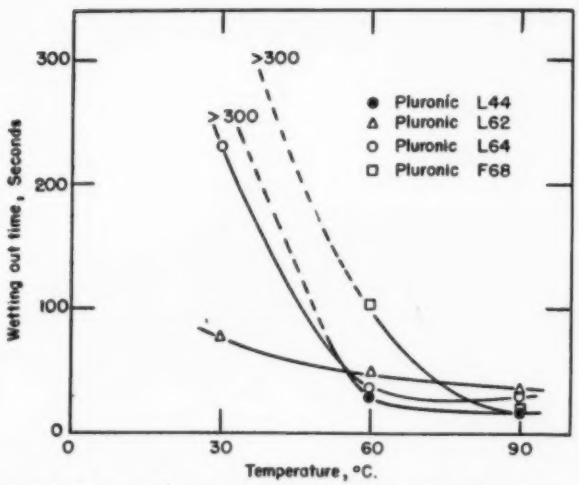
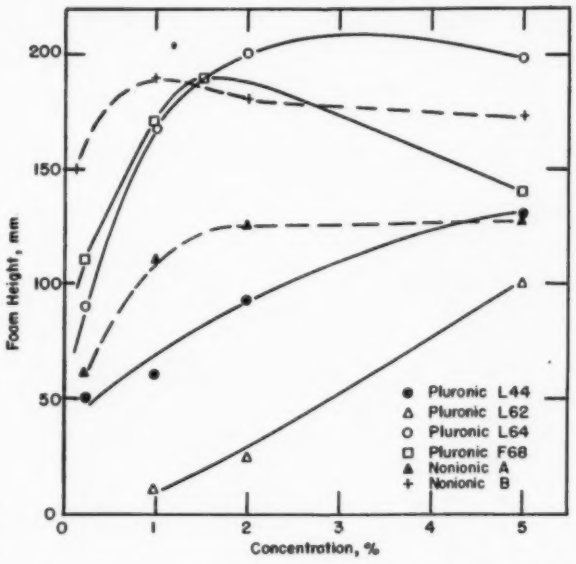


Figure 1 (above). Wetting out time of Pluronics in distilled water at 0.10 per cent conc. canvas disc method. Figure 2 (right). Foaming properties of Pluronics in distilled water at 110° F. Ross and Miles Pour-Foam Method.



Flake Nonionics

(*From Page* 43)

tion of 0.1 per cent shows a sharp increase in wetting power with temperature. This phenomenon is particularly important since many of the applications in which wetting is desired occur at temperatures at or above 60° C.

At concentrations of 0.25 per cent, Pluronic L62 is the most effective wetting agent of the Pluronics in the temperature range of 30° C. Pluronics L64 and L44, containing a higher proportion of hydrophilic material, give optimum results at about 60° C., while Pluronic F68, which has the highest hydrophilic-hydrophobic ratio, continues to show improved wetting ability as the temperature rises. At 90° C., Pluronic L44 and Pluronic F68 are very efficient wetting agents.

Foaming Properties: Figure 2 presents the foaming values for these Pluronics, in distilled water at 110° F. as determined by the Ross and Miles "Pour-Foam" method of foam measurement. (1)

As shown by Table IX, Pluronic L62 at normal use concentrations is essentially a non-foaming material. The foaming ability in this series increases with an increase in the percentage of hydrophilic material present until in distilled water the value for Pluronic F68 approaches that of some alkyl aryl sulfonates. However, the foam height for all of these products decreases rapidly on standing. At higher temperatures, the initial foam height is considerably increased, but the foam is less stable at these temperatures and disintegrates to very low values in a few minutes. In addition, in the presence of contaminants such as calcium and magnesium ions, oils and heavy soil, these surface active agents generate very little foam, so that each of them is essentially non-foaming under normal use conditions.

(*Turn to Page* 90)

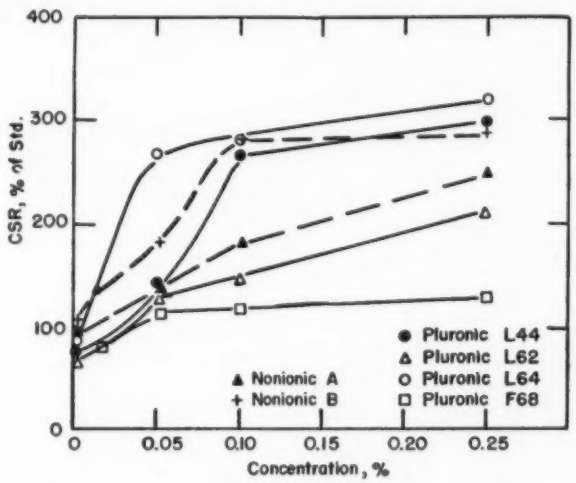


Figure 3 (right). Carbon soil removal by Pluronics in distilled water at 140° F.

TABLE IX
Foam Height of Pluronic Detergents

Concentration, %	Pluronic L62	Pluronic L64	Pluronic F68	Pluronic L44	Nonionic A	Nonionic B
	mm.	mm.	mm.	mm.	mm.	mm.
1.0	10	170	185	60	110	190
0.25	*	90	110	50	60	150
0.1	*	70	70	25	50	120
0.05	*	50	55	*	45	100

* The foam height was too low to be significant.

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You don't have to guess. You can know . . . instantly . . . accurately . . . when filtration is complete . . . when a filter cloth breaks . . . when suspended solids vary.

It's easy with the Purifil on the job. This photo-electric device will detect and report variations in cloudiness in concentrations as low as ½ part per million. Its delicate measurements and accuracy match laboratory standards. Yet the Purifil *is not a laboratory instrument.* It's a rugged, precision-built production tool designed for day-in, day-out, round-the-clock operation.

The operation of the Purifil is extremely simple. The liquid or gas to be inspected is by-passed from any suitable point in the production line and passes continuously through the inspection chamber. The dial is set to a predetermined acceptance point which may be interpreted in parts per million. A green light shows until acceptance point is exceeded. If exceeded, a red light appears, an alarm sounds, or a relay actuated remote indicator, recording meter, proportional controller or cut-off valve is set in operation.

The Purifil has many practical applications in the processing of edible fats, fatty acids, soaps, detergents, dyes, cosmetics, oils and numerous other products. Daily production operation has fully demonstrated its amazing accuracy and dependability resulting in continuous control of product quality and substantial savings in man hours.

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DETECTS suspended solids in liquids or gases in concentrations of less than one part per million.

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Saponification No.	198-207
Iodine No.	115 Minimum
Color (Gardner)	6-8
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Water White	X	X	X								
Regular	X	X	X	X	X	X		X			
SM-500	X	X	X	X	X	X		X			
SM-600	X	X	X	X	X	X		X			
Essential Unsaturated Free Fatty Acids											X
SOYA											
Water White	X	X	X								
Regular	X	X	X		X	X		X			
RO-4	X	X	X		X	X		X			
RO-10	X	X	X	X	X	X	X	X	X		
RO-11S	X	X	X		X			X			
MIXED VEGETABLE RO-8	X	X		X	X	X	X	X	X		
CORN-SOYA Double-Distilled				X		X	X	X	X		
CORN Double-Distilled				X		X	X	X	X		
COTTONSEED Double-Distilled		X			X		X	X	X		
COCONUT Double-Distilled		X				X		X		X	

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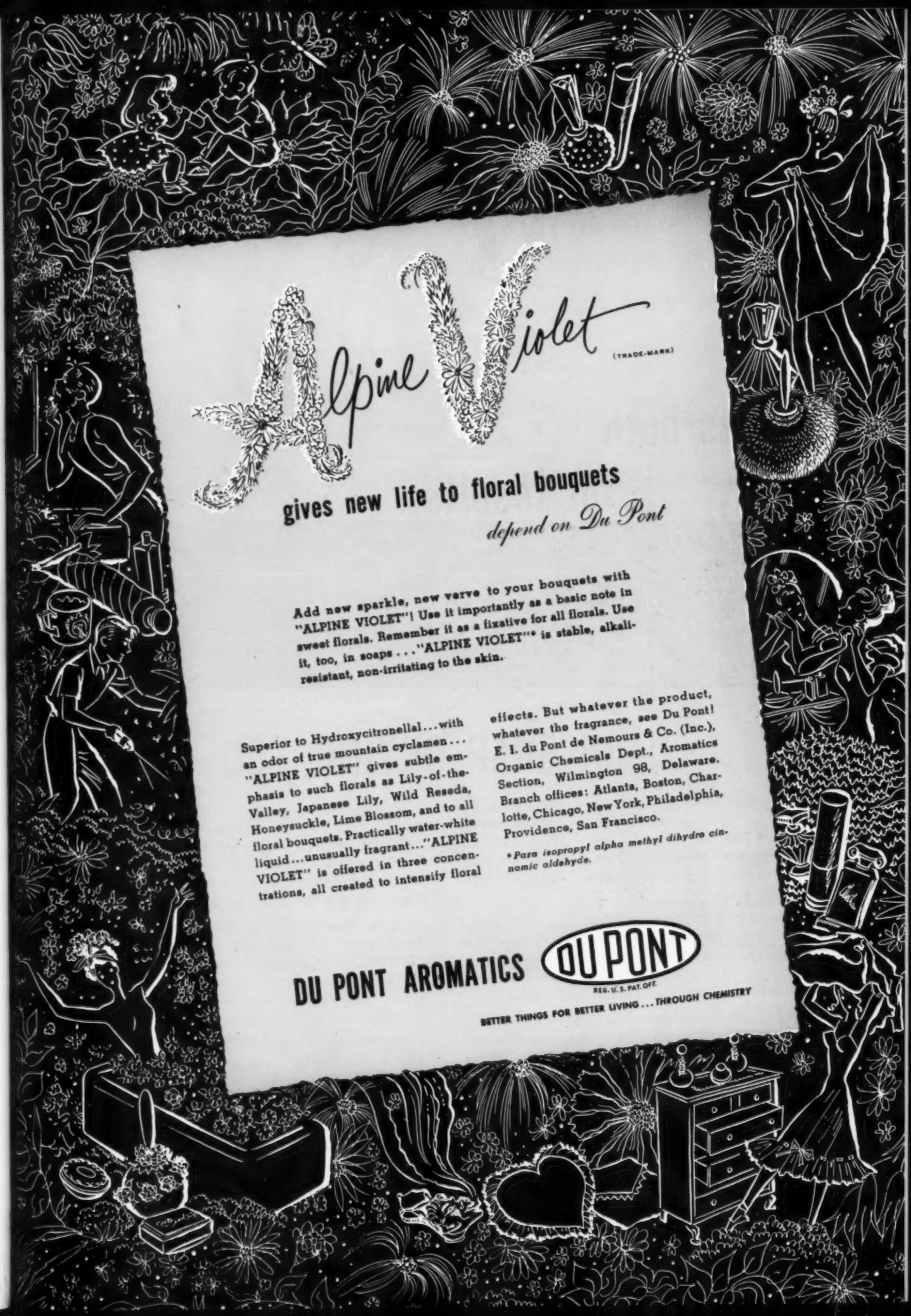
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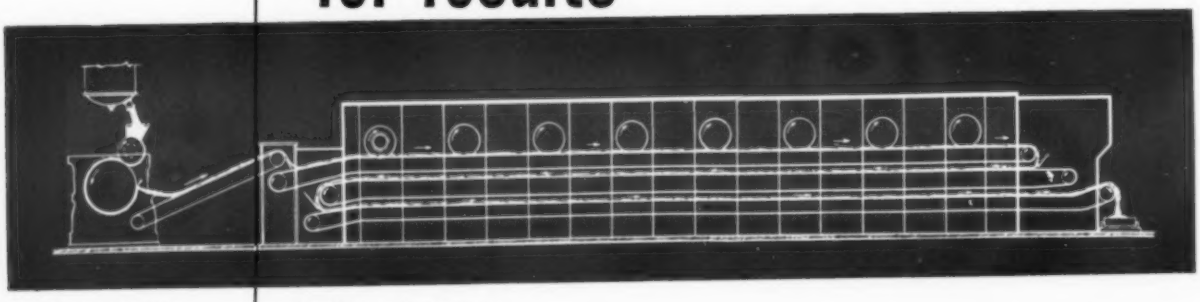

Precision engineered chilling machine

Carefully designed dryer

IN SOAP DRYING, TOO . . .

Anyone who knows polo is aware that scoring depends upon two important elements—a skillful player and a trained pony. In flake soap drying there are two important factors for best results. First—uniformly formed ribbons and second—carefully controlled drying.

To make both of these possible calls for careful machine design. The uniformity of the ribbons is determined by the chilling machine, while the evenness of the drying is governed by accurate control that must be possible with the drying system.

It is obvious that ribbons which vary in width or thickness cannot be dried to uniform moisture content—even in the most carefully controlled dryer. Neither can a precision designed chilling machine compensate for a poorly engineered drying system. Both must be carefully designed and built for best results.

Ribbon uniformity is governed by the degree of precision with which the chilling machine is designed and built. Proper drying is possible only to the extent that there is a uniform circulation of heated air, for the correct drying time and at temperatures to suit the characteristics of the soap being dried.

To meet these needs, the Proctor Automatic Flake Soap System combines a precision engineered chilling machine for making ribbons and a drying system that makes possible careful control of the air circulation, temperatures, and conveyor speed to suit the individual requirements of the soap being dried.

For an informative booklet describing this system in detail, write today.

Much Proctor equipment is covered in full or in part by patents or patents pending.

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U.S.I. CHEMICAL NEWS

October ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1950

Reaction with Phosgene Important in Manufacture Of Many Intermediates

U.S.I.'s Wide Experience With Phosgenation Reactions Available to Customers

U.S.I. production facilities and manufacturing know-how can result in substantial savings to chemical manufacturers who wish to take advantage of U.S.I.'s long experience with phosgenation reactions. The importance of phosgene as a reagent in the production of a wide range of intermediates is well known. The two reactive chlorine atoms in the molecule makes possible the ready coupling of other organic molecules while simultaneously introducing the keto structure. Alcohols react with phosgene to form chlorocarbonates (chloroformates) and these in turn react with alcohols to form dialkylcarbonates. Phenols similarly form chlorocarbonates and diaryl carbonates. The chlorine atoms of phosgene react with amines forming carbonyl chlorides which upon reaction with other amines yield substituted ureas. Aromatic hydrocarbons react with phosgene to yield ketones.

U.S.I. has long employed the first of the above reactions to produce ethyl chloroformate and diethyl carbonate. These materials are offered as regular products with rigid specifications. In addition, however, U.S.I. has a background of experience in laboratory, pilot plant and commercial scale on other products resulting from phosgenation reactions. Prospective users are invited to discuss with U.S.I. their requirements for such materials.

Fiber Properties Studied By New Micrograph Method

A host of fiber properties not studied by optical means, such as dyeing of the fiber, lustre, molecular orientation, and physical structure, can now be investigated by recently developed replica techniques for electron microscopy, a research scientist states. Some of the micrographs prepared by the new technique may be interpreted simply as direct, magnified images of obliquely illuminated surfaces, but they are actually radiographic images made by electrons transmitted through a very thin metallic film exactly duplicating the contours of the fiber surface, according to the scientist.

The appearance of oblique illumination is said to be achieved by evaporating a metal of high atomic number and condensing it onto the surface. In a sense, the scientist points out, the surface has been "illuminated" with a beam of metal atoms rather than light.

Superior Replicas Prepared

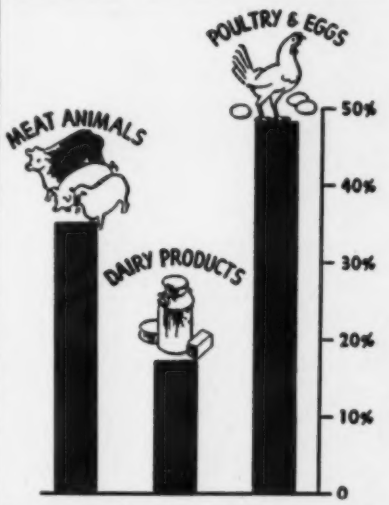
He states that until recently fiber replicas were usually prepared by making an impression of the fiber surface in a thermoplastic material followed by deposition of silica onto this mold with subsequent dissolution of the mold in a suitable solvent. For fibres which readily dissolve in organic solvents, however, superior replicas reportedly may be prepared by depositing the replicating film directly on the fiber.

U.S.I. APF Supplement Compares Favorably With Antibiotic APF Products

University Tests Show U.S.I. APF Supplement Gives Best Grade of Dressed Broiler of All Rations Studied

Farmers may now obtain uniform growth increases in farm animals which are fed rations containing an Animal Protein Factor supplement made by a primary fermentation process, it was reported by U.S.I. scientists at the recent fall meeting of the American Chemical Society.

This new product has been demonstrated in various laboratory tests to perform at least as well as other commercial materials, including APF supplements from antibiotic by-products. In addition, practical tests conducted at a leading university showed that the U.S.I. APF supplement gives the best grade of dressed broiler of all rations that were studied.



Increases over pre-war (1935-39 averages) in production of livestock and livestock products. The tremendous growth of the feed industry in the past ten years stems from these farm-production trends.

Graph courtesy of Feeds Illustrated—*Prepared by Grantham Graphics*

Similarly, at another prominent university, experiments on chicks demonstrated that the U.S.I. product can completely replace fish solubles in many practical formulations, and that it gives a better growth response than is obtained by the use of vitamin B_{12} alone.

Feed Booklets Available

A number of valuable U.S.I. booklets on feed are available to feed manufacturers: "The Road Ahead with APF and Antibiotics," "New Trends in Animal Nutrition," and "Proteins and Amino Acids in Animal Nutrition." For copies, write on company letterhead to the Editor, *U.S.I. Chemical News.*

Protruded Metal Packing Proves Highly Efficient

Comparative tests in distillation equipment indicate that new protruded metal packing is more efficient and economical than any of the previously known "efficient" packings. Key to the new packing's greater efficiency is its property of self-wetting on exposure to liquids, an advantage over types that require flooding for complete wetting.

Possible Use in Liquid Extraction

This automatic wetting property is not the same for all liquids with all metals. Protruded nickel packing, for example, is wetted by hydrocarbons but has almost no affinity for water. Research is anticipated to investigate the extent to which these differences can be used as driving forces in liquid extraction and similar processes. Experiments also indicate that the new packing produces good results in vacuum distillation.

Equipment Size Can Be Increased

The new packing's automatic wetting property is said to give it another advantage in that it suffers less from scaling up equipment size and increasing column diameter than any other packing known. Additional research on reflux distribution methods for large distillation columns is also reported to have produced very promising developments.

Find Antihistaminics Have Antifungal Action

A number of cases of athlete's foot are claimed to have responded to applications of a cream containing one of the antihistaminic compounds. Tests on this and another antihistaminic compound indicate that they possess properties which are inhibitory to pathogenic fungus species and that their activities are therefore not limited to the alleviation of allergic manifestations incited by these fungi.

Publishes New Booklet On Industrial Water Problems

Industrial water problems of all kinds—procurement, treatment, usage, and disposal—and the facilities for coping with them are discussed in a new booklet published by a Pennsylvania company.

ADVERTISEMENT—*This entire page is a paid advertisement* *Printed in U. S. A.*

October ★ **U.S.I. CHEMICAL NEWS** ★ 1950

Chlorophyll Found Useful In Peptic Ulcer Therapy

According to a recent announcement, a new chlorophyll preparation has been obtained which promises to become an important factor in the treatment of peptic ulcers. For some time it has been known that water soluble chlorophyll possessed tissue-stimulating action and that it promoted healing of chronic wounds. It has also been thought that this action could be used to advantage in the treatment of peptic ulcers, provided the chlorophyll could be brought into contact with the site of the lesion. Now, with the announcement of this new chlorophyll preparation, these requirements seem to be met.

Complete Healing in 58 Out of 79 Cases

A total of 79 patients with X-ray-proved duodenal and gastric ulcers were treated with this new chlorophyll preparation without the usual restrictions on diet, smoking, alcoholic beverages, or daily activity. Out of the total number of cases, 58 showed on X-ray examination complete healing in from 2 to 7 weeks. Furthermore, of the 58 cases showing complete healing, 20 cases had no recurrence of symptoms up to 11 months after treatment.

Issues New Bibliography On Container Coatings

A recently issued bibliography on container coatings is said to provide abstracts of some 150 patents and research papers on food and other types of container coatings, published since 1941. Author, inventor, and patent indexes are included.

New Booklet Offered On Phosphate Coatings

A valuable new booklet discussing the latest developments in Phosphate Coatings is now available. It contains 12 pages of detailed information on phosphate coating chemicals for use in paint-bonding, rust-proofing and protecting friction surfaces, and for improving drawing and extrusion.

Polyamide Resins In Water Suspension

Polyamide resins, widely used as heat-sealing adhesives and resistant coatings, are reported available now in water suspensions. A new process, in the pilot-plant stage at the present time, is said to overcome difficulties encountered previously in attempts to make water dispersions of the polyamides.

The new suspensoids are described as cationic and remarkably stable, and are claimed not to coagulate even when repeatedly frozen and thawed. They are heat-sealing and adhere firmly to most materials, according to the makers, and will fuse to become resistant to water, water-vapor, and oil. They are said to dry rapidly and will not block even under severe pressure. The suspensoids are reported available in two grades, one an essentially uncompounded suspensoid and the other modified for superior abrasion-resistance and for producing heat-seal bonds with improved stability at low temperatures.

New Collection of Reports On Utilization of Wood

A comprehensive collection of reports on wood utilization is reported available from the government. The collection is said to include 24 presentations dealing with wood research by the armed forces; the mechanisms of wood lignification and deterioration; utilization of wood for packaging; as a construction material in timber or "sandwich" form, and as conversion products; and wood requirements for aircraft, shipbuilding, and other fields. Some papers deal with fungus and insect problems, particularly with the marine borer.

Synthetic Albumen Process

A new Norwegian process for producing synthetic albumen from codfish waste has been announced. The product, claimed to contain 80 to 90 per cent pure protein reportedly can be used for baking, ice cream, mayonnaise, and pharmaceutical products, as well as in textile and paint industries.

TECHNICAL DEVELOPMENTS

Further information regarding the manufacturers of these items may be obtained by writing U.S.I.

"Liquid sandpaper," a chemical compound to replace sanding of surfaces before refinishing, removes wax, grease, and polish from hardwood floors and painted and enameled surfaces with a single wiping, according to the makers. It reportedly dulls gloss and provides a flat undercoat. **(No. 609)**

To protect against solvent fires involving ether, esters, acetone, alcohol, and related solvents, a new foam charge effectively covers and snuffs out flames in seconds, insulating threatened areas and preventing flashbacks, the makers claim. **(No. 610)**

A new snap-on spout for paint cans is said to permit faster stirring of full paint cans without slopping over edge and to make pouring easier. Spout is a natural resting place for the wet brush. Easy to clean, it reportedly may be used over and over. **(No. 611)**

A new-type light filter is claimed to block dingy red and yellow light from the rays of incandescent light bulbs. The filter, attached to a magnifier which nearly doubles light intensity, can be turned to any position on the bulb to focus light as needed. **(No. 612)**

To permit closed bin tops and bin storage of materials previously considered impossible to feed from bins, a new pneumatic device is claimed to provide direct action on bin contents rather than the bin, positive extrusions, easy installation, vibrationless operation, safety, and economy. **(No. 613)**

A new combination heatable flask and separatory funnel may be used, it is reported, for weighing, drying, dissolving, mixing, concentrating, precipitating, cooling, heating, melting, boiling, distilling, evaporating, decanting, and crystallizing without need of transferring to other flasks. **(No. 614)**

A new antiseptic liquid hand soap, developed for the special use of food handlers and industrial workers, is said to contain hexachlorophene to help reduce bacterial flora on the skin and an emollient and skin-softener to help lessen certain skin irritations caused by frequent hand washing. **(No. 615)**

A new portable 85° glossmeter, specially designed for measuring the sheen of interior wall paints and camouflage paints, is on the market. **(No. 616)**

A new liquid accelerator, miscible with water, can be added directly to natural or synthetic latex, the makers state. Films vulcanized with it are described as having high tensile strength and good aging properties. **(No. 617)**

New laminated tubing for the chemical and oil processing industries, made of glass fibers bonded with resins, is said to have the strength of steel and to be rust- and corrosion-proof. **(No. 618)**

PRODUCTS OF U.S.I.

ALCOHOLS
Amyl Alcohol (Isoamyl Alcohol)
Butanol (Normal-Butyl Alcohol)
Fusel Oil—Refined
Propanol (Normal-Propyl Alcohol)
Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof U.S.P., Absolute—200 Proof
Solox*—proprietary solvent—regular and anhydrous
ANTI-FREEZES
Super Pyro* Anti-Freeze
U.S.I. Permanent Anti-Freeze
ANSOLS
Ansol* M
Ansol* PR
ACETIC ESTERS
Amyl Acetate—Commercial and High Test
Butyl Acetate
Ethyl Acetate—all grades
Normal-Propyl Acetate
OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate
PHTHALIC ESTERS
Diamyl Phthalate
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Ethyl Chloroformate
INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-chloroanilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloroanilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate
ETHERS
Ethyl Ether, U.S.P.
Ethyl Ether, Absolute—A.C.S.
ACETONE — A.C.S.
FEED PRODUCTS
Curbay B-G*
DL-Methionine
Riboflavin Concentrates
Special Liquid Curbay*
U.S.I. Animal Protein Factor Supplement
Vacatone* 40
RESINS (Synthetic and Natural)
Arochem*—modified types
Arofene*—pure phenolics
Aroflat—for special flat finishes
Aroplaz*—alkyds and allied materials
Congo Gums—raw, fused & esterified
Ester Gums—all types
Natural Resins—all standard grades
INSECTICIDE MATERIALS
CPR Concentrates: Liquid & Dust
Piperonyl Butoxide
Piperonyl Cyclonene
Pyrenone* Concentrates: Liquid & Dust
Pyrethrum Products: Liquid & Dust
Rotenone Products: Liquid & Dust
INSECTIFUGE MATERIALS
Indalone*
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PRODUCTION CLINIC

By E. G. THOMSSEN, Ph.D.

STANDARDIZATION has played a very important role in the advancement of American production methods. Its application has resulted in order where chaos existed previously. Without the long list of standard sizes, methods, gauges, specifications, etc. now existing we would be rambling among a lot of distracting details that would stifle our progress.

In spite of the numerous advantages to be derived from standardization of methods in many fields, most of us fail to apply such procedures to management problems. We like to be individualistic. If a standard method is suggested for facilitating handling of important matters that apply to our way of carrying out our strictly personal, production methods, we often prefer an original or individual approach.

It is our opinion that tried, logical, standard methods applied to production problems produce better results than the haphazard, introverted approaches so frequently encountered, and which often lead to unfavorable results.

Many of us do not seem to be acquainted with the more accurate, if stereotyped, methods for the solution of every day problems. Let us examine more closely three types of approach to production problems in the hope that they will searchlight the method of reasoning used in their solution.

The first is the devoloping of a new and improved piece of equipment for the purpose of increasing output. The logical approach works out as follows:

1. The basic requirements of the work to be done, should be listed.
2. All equipment used in our own and other industries for a similar purpose should be listed.
3. From these the piece of equipment considered most satisfactory for the requirements of our work should be selected.
4. The equipment should be modified so as to apply it to the specific work.

DR. THOMSSEN

The second problem is that of devising a new and more efficient method to supersede an unsatisfactory, older production detail. Experience has shown these steps produce results:

1. We should list all the faults of the production method used at present.
2. We should obtain and evaluate all information and data pertaining to the mechanical systems or processes used for operations similar to that under consideration.
3. From these we should select the system or method which appears suitable for our production methods.
4. We should proceed to eliminate the faults in the equipment selected.

The third problem is the production of one of the items presently manufactured. In this connection it has been found that the following five constructive steps produce good results. These are:

1. A thorough review of all the technical literature published to date pertaining to the chemical item under consideration.
2. From this review the best method thus far developed to manufacture the product under consideration is selected.
3. All conditions involved in this method of manufacture should be listed.
4. All possible means to vary each condition should be listed.
5. That condition which can be varied most promisingly and the method of bringing this about should be selected.

By following these logical systems in deciding upon a course of action to solve similar problems, with all due perseverance, eventual solution is surer than by the random approach. The element of luck or hunches upon which some individuals depend is reduced to a minimum. Loss of time, money, as well as inconsistencies, are largely eliminated.

Koppers Antioxidant

DI - TERT - BUTYL - PARA - CRESOL (D.B.P.C.) is a highly effective antioxidant made by Koppers Co., Pittsburgh. It is employed in numerous cases. An application of interest is for the prevention of deterioration of pyrethrum-containing insecticides. D.B.P.C. inhibits the marked tendency of these insecticides to decompose upon exposure to light and air. Four-ounce samples of this anti-oxidant are available by writing on company letterheads.

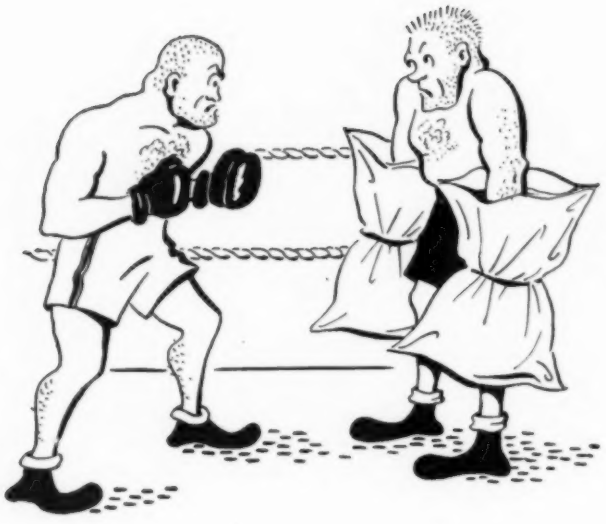
Small Size Paste Mixer

CHAS. Ross & Son, Brooklyn, recently developed a one-pint kneader and mixer for making up small batches of heavy pastes. Built of stainless steel, the mixer is steam-jacketed, may be converted for vacuum mixing and is driven by an explosion proof motor.

Liquid Wax Addition

ROHM and Haas Co., Philadelphia, are featuring the use of their "Amberol 750", a low cost, synthetic resin as a replacement for other additives in liquid wax formulations. It is said to increase gloss, uniformity and leveling properties of such products. It is stable to freezing temperatures.

To Be of Real Service The Tool Must Fit the Job!



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The famous Atlas SPANS* and TWEENS* are surface active agents that offer a complete range of solubilities in oil and water. They offer *you* the correct emulsifiers for any emulsion problem.

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ATLAS POWDER COMPANY, CANADA, LTD., Brantford, Canada

Information is available upon request.

Wall Washing Machine

REX Cleanwell Corp. of Brazil, Ind., is stressing the necessity of a pressure-type wall washing machine for proper building maintenance. Because of ease of operation with excellent performance results, this type of machine recently has become a big seller. For cleaning smooth, washable walls the machine has decided advantages over the old sponge and bucket method. Sanitary supply dealers may obtain descriptive literature and prices from the company.

Grinder for Insecticides

TO grind such fibrous materials as pyrethrum and rotenone down to a uniform 200-mesh powder successfully is a difficult job. Williams Patent Crusher & Pulverizer Co., St. Louis, claim that this is efficiently done with their roller mill. They claim for pyrethrum 98 ½% passes 200 mesh. The mill is alsoused to grind DDT and sodium fluoride.

Glycerine Purification

ILLINOIS Water treatment Co., Rockford, Ill., features the use of ion exchange resins for purifying crude glycerine. It is more economical than distillation, the company claims. Ionized solids, color and odor producing substances may be removed from diluted water solutions. A more uniform product, more light-stable and the production of no foots result by this refining method. Evaporation is not eliminated, however. Three glycerine producers are installing the process.

Fatty Acid Flakes

ARMOUR and Company, at their new McCook, Ill., plant are using the Stokes Rotary Drum Dryer to flake their high melting point fatty acids, well known as "Neo Fats." To convert the molten fatty acids into flakes, they are pumped to a trough underneath this dryer. As a rotary drum, cooled internally by a water spray, revolves, it dips into the liquid fatty acids in the trough. A thin film adheres to the cylinder. This cools during a 270° turn. A doctor knife removes the film in the form of a fine crystalline powder. A conveyor carries the flakes to the bagger where they are filled into 50-lb. bags. This Drum Dryer is built by F. J. Stokes Machine Co., Philadelphia. It is used in many other applications for producing flakes and granular materials.

Moldy Soap Wrappers

MANY years ago, we ran into the problem of mold spoiling the appearance particularly of dark-colored soap wraps. Casein coated papers, commonly used, are subject to the action of these fungi. Monsanto Chemical Co., St. Louis, will give advice upon request as to how to prevent this troublesome condition by the use of their "Santobrite" (technical sodium pentachlorphenate). Small quantities added to the casein glaze on paper control the fungi.

Research Management Book

A bibliography of books and articles on "Management of Industrial Research" was issued recently as a 24-page booklet by Arthur D. Little, Inc., Cambridge, Mass. Copies are available by writing the company.

New Organic Acid

A new organic acid "Evanacid 3 CS," has been produced in pilot plant quantities by Evans Chemetics, Inc., New York, and is described in a recently issued brochure. The new acid is a tricarboxylic acid containing a thioether group. It reacts much like a typical tricarboxylic acid, according to the brochure. It forms salts, amides, esters, acid chlorides, and other derivatives in a manner similar to such well-known tricarboxylic acids as citric and aconitic. In many cases the derivatives of the mono-or di-substituted products can be synthesized to yield a series of interesting products.

Surface Active Agents. The alkali and amine soaps of partial esters and amides of "Evanacid 3 CS" show excellent properties as emulsifying and wetting agents, detergents and foaming agents.

A copy of the brochure may be obtained by request to the company, at 250 E. 43rd St., New York 17.

Syn. Org. Chems. Booklet

The 1951 edition of the booklet, "Physical Properties of Synthetic Organic Chemicals" was issued recently by Carbide and Carbon Chemicals Division, Union Carbide and Carbon Corp., New York. The 16-page booklet is a condensed guide for users of organic chemicals. It presents data on applications and physical properties of more than 250 synthetic organic chemicals in tabular form for ready and easy reference. Copies are available on request by writing to the division at 30 E. 42nd Street, New York 17.

Sharples Centrifuge Data

A concise, factual bulletin prepared for industries requiring the application of centrifugal force to perform the functions of separation and clarification of liquids; and removal, recovery and classification of solids was announced recently by Sharples Corp. Philadelphia.

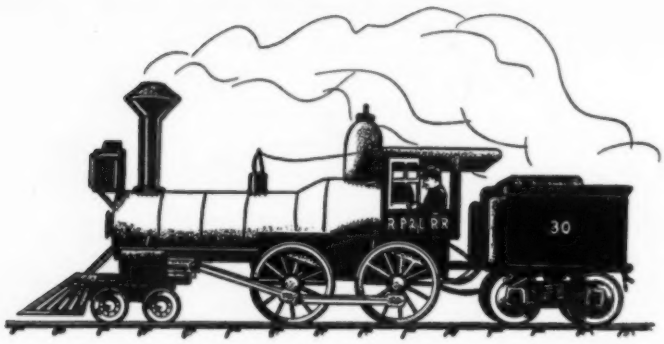
Both tubular bowl and disc type centrifuges, together with the horizontal bowl decanter type and crystal dehydrator are summarized and illustrated by both photographs and flow diagrams.

A copy of Bulletin 1259 may be obtained by writing to Sharples Corp., 2300 Westmoreland Street, Philadelphia, Pa.

Mathieson Personnel Shifts

A number of changes in the operating division of Mathieson Chemical Corp., Baltimore, were announced recently by Carl F. Prutton, vice-president and director of operations. Among those involved in the changes were R. B. Worthy, vice-president, formerly general manager of both the Saltville, Va., and Baltimore operations. He is now devoting his entire time to the Saltville operations, where he is making his headquarters. His new responsibilities include the supervision of the construction and operation of a new six million dollar electrolytic chlorine plant at Saltville.

Arthur T. Bennett, vice-president, formerly general manager of SASCO operations, with headquarters in Houston, Tex., has been appointed general manager at Baltimore.



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Lard Oil
Neatsfoot Oil
Grease
Tallow
Lanolin

FATTY ACIDS

Red Oil
Tall Oil
Stearic Acid
Hydrogenated Fatty Acid
Cottonseed and Soybean Fatty Acids
Tallow

ALKALIES

Caustic Soda, Solid, Liquid, and Flake
Soda Ash, Light and Dense
Carbonate of Potash, calcined and hydrated
Calcium Chloride
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Tetra Pyro Phosphate
Quadrafos Granular and Beads—a stable polyphosphate for water conditioning and mild but effective detergency.

SILICATE OF SODA—Liquid powdered and solid.

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MAYPONS—Unique surface active agents; prolific foam; high detergency and emulsifying powders; suitable for cosmetic and industrial use.

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Solvent Extraction Book

A bulletin, described as the first general publication on the patented York-Scheibel liquid-liquid extraction equipment, was announced recently by Otto H. York Co., East Orange, N. J. The bulletin, No. 12, bears the title, "The Practical Way of Solvent Extraction."

Snell Has Spray Dryers

Packaged unit spray dryers, available in three sizes, were announced recently by Foster D. Snell, Inc., New York. Synthetic detergents and powdered soap products can be handled by the driers, according to the firm. The dryers can be heated directly or indirectly, using natural gas, manufactured gas or fuel oil. They are especially useful for processing products which are heat sensitive, or of a moisture and density content which must be controlled closely, or for products which must be produced in highly soluble form.

The engineering department of the company is equipped to specify and design the necessary tower and accessory equipment and all supporting steel and housing, where needed.

Two Schimmel Folders

Two folders, one on its line of specialties, the other outlining the services of its perfume laboratory, were issued recently by Schimmel & Co., New York. A musk type odor, "Muscaro W", and Schimmel colognes are discussed in the folder on specialties.

New Oronite Silicates

Development of a new group of organic silicates which are said to remain liquid over an extremely wide temperature range was announced recently by Oronite Chemical Co., San Francisco. Although the new materials contain silicon, they have a different chemical composition and properties than the silicones.

Some of the silicates are liquid over a temperature range of 100° F. to more than 700° F. Among applications is their use in polishes.

The new products are not yet commercially available, but the company currently is making a survey of market possibilities while an intensive research program is being undertaken by Oronite's affiliate, California Research Corp., on new applications and other phases of development.

A large part of the research work leading to the development of the compounds was done by Hodges Research & Development Corp., Redwood City, Calif., from which the Oronite organization recently acquired full rights.

Sodium Dispersions Data

Three technical bulletins describing the preparation, use and handling of sodium dispersions were issued recently by the research division of National Distillers Chemical Corp. and are available upon written request to the sales offices, State Road, Ashtabula, O.

Steam Jet Syphons

A full line of "SK Steam Jet Syphons' which operate on the jet principle utilizing the energy of steam under pressure to pump, heat, mix liquids and handle solids is described and illustrated in new Bulletin 2-A recently issued by Schutte and Koerting Co., Philadelphia.

Water Hardness Booklet

The new "one-minute tests" for determining water hardness are described in Bulletin IRE50 just issued by Hall Laboratories, Inc., Hagan Building, Pittsburgh 30, Pennsylvania. Procedures, reagents and equipment for the new tests are pictured and described. The test procedure requires approximately one minute to complete, in contrast with the century-old "soap-shaking" method. Because of clear-cut color change at the endpoint of the tests, the subjective or human-error element is eliminated. Accuracy to within one ppm. has been demonstrated.

The new tests may be employed to determine total water hardness; hardness due to calcium alone; or hardness due to magnesium alone (this last simply by difference between total-hardness and calcium-hardness results).

Antara Glycol Bulletin

Data Bulletin No. 303, an eight-page folder giving properties, characteristics, uses and handling information for 1,4-butanediol, one of the additions to the glycol series now available in pilot plant quantities, was issued recently by Antara Products, General Aniline & Film Corp., 444 Madison Ave., New York 22. The folder is aavilable on request.

Detergent File Booklet

A booklet on his file of synthetic detergents was issued recently by John W. McCutcheon, consulting chemist of 475 Fifth Ave., New York. The file consists of nearly 800 cards, on each of which is given the name of the detergent, its manufacturer, properties, costs, etc. The cards are "keysorted" and are housed in a metal cabinet. They are brought up-to-date periodically.

Chemicals from Coal Book

Properties of 58 commodity and specialty chemicals recovered in the coking of coal or derived from the distillation of coal are described in a 44-page booklet issued recently by the Koppers Tar Products Division of Koppers Co., Pittsburgh. Data sheets in the "Koppers Chemicals from Coal" booklet present the physical and chemical properties of the coal derivatives and also suggest uses for the compounds. Copies of the booklet may be obtained by requesting booklet T05-500 from Koppers Co., Inc., Tar Products Division, Pittsburgh 19, Pa.

R. P. Smith to Kraft

Robert P. Smith, formerly with Armour & Co., Chicago, in its soap operation, and previously connected with Arthur C. Trask & Co., Chicago, recently joined the sales service staff of Kraft Chemical Co., Chicago. He is a chemical engineer graduate of Purdue University. During the war he served with the Navy. In his new post, Mr. Smith is specializing in soaps, fatty acids and oils. He is making his headquarters at the company's main offices in Chicago.

SELL *Moore* AND SELL

- more soap
- more dispensers

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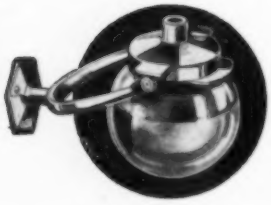
No. 200



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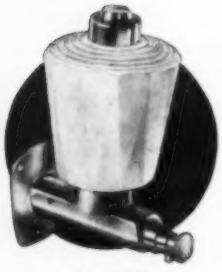

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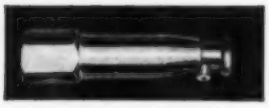

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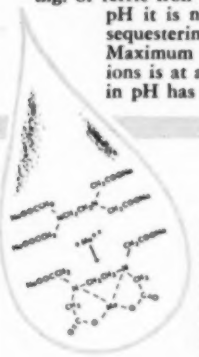
NEW, POWERFUL SEQUESTRANT VERSENE Fe-3 *
(Inactivates Trivalent Iron)

VERSENE Fe-3* does more than soften water. It actually inactivates troublesome trivalent iron as well as calcium, magnesium and other metallic salts. Until VERSENE Fe-3 was developed there was no really satisfactory sequestering or chelating agent for ferric iron.

At pH7, 10 cc of VERSENE Fe-3 sequesters 167 mg. of ferric iron plus 158 mg. of calcium. At this pH it is nearly 10 times more effective in sequestering trivalent iron than at pH12. Maximum effectiveness on alkaline earth ions is at about pH9 and a further increase in pH has little additional effect.



VERSENE*
(REGULAR)

Regular VERSENE is an exceptionally versatile product for the Soap Industry. It is chemically known as Ethylene diamine tetra acetic acid tetra sodium salt. Versene does the following things with great effectiveness.

SOFTENS WATER . . . without the formation of precipitates. It forms soluble non-ionic compounds with alkaline earth and other ions such as ferrous ions which cause hardness in water. VERSENE is the only sequestering agent that can be manufactured into soap and remain in it as a water softener without decomposition.

CLARIFIES LIQUID SOAP . . . increases foam and rinsibility. Eliminates precipitates by removing interfering metal ions through formation of inactive and stable complexes of VERSENE.

ANTI-OXIDANT . . . for fats, oils, soaps, fatty acids, and other organic materials. Minute amounts of VERSENE act as a preservative and prevent rancidity.

DISSOLVES GREASE AND FOOD DEPOSITS . . . acts as a buffering agent. Saponifies fats. "Solubilizes" and partly hydrolyzes proteins. Provides two-way cleansing action.

PURIFIES ORGANIC MATERIALS . . . Organic materials contaminated with metals may be purified by the addition of small quantities of VERSENE. The offending metals are complexed and their ion activity reduced. The complex compound may in most cases be easily removed from the organic material thus insuring a higher grade product.

Regular VERSENE is available either as a pale, straw-colored aqueous solution or as a dry, white powder.

Write for samples, further applications and complete specifications.

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PRODUCTS AND PROCESSES

Cold Water Detergent

A product designed for use with cold water in washing household utensils consists of 75 parts of sodium carbonate, 15 parts of sodium phosphate and 10 parts of sodium α-isopropyl-β-naphthalenesulfonate or sodium α-butyl-β-naphthalenesulfonate. Fr. Pat. 490,069, through *Chem. Abstracts.*

Hard Soap Antioxidant

The sodium salt of ethylene diamine tetracetic acid, sold as "Nullapon B", is effective in preventing metals such as cobalt, copper and manganese from acting as promoters of oxidation. A concentration of .03 per cent is adequate, if "Nullapon B" is intended as an antioxidant, but amounts up to two per cent may be used to increase the lathering power of the soap in hard water. *Schimmel Briefs* No. 185 (1950).

Detergent Paste

A cream or paste type detergent is prepared by combining the salt of a sulfuric ester of a fatty alcohol, containing at least 10 carbon atoms, with a dispersion of a hydrophilic colloid, and adding a small amount of sodium chloride to the mixture. Brit. Pat. 590,264, through *Chem. Abstracts.*

Perfumed Disinfectant

A typical modern germicide for household use contains the following combination of active germicidal constituents with solvents and perfume: 2.5 grams of monochlorxylenol, .5 grams amyl metacresol 15 ml. isopropyl alcohol, 5.0 ml. triethanolamine, 5.0 ml. ricinoleic acid, 5.0 ml. jasmin compound, and distilled water to make 100 ml. Part of the water is mixed with the fatty acid and triethanolamine. To this, soap, a mixture of the bactericidal agents, perfume and alcohol are added, and the whole diluted with the bulk of the water in gradual stages. *Alchimist* 4, No. 8, 190 (1950).

Marine Oil Soaps

A colored but odorless detergent may be prepared from marine animal oils by polymerizing the oil at 280°-320° for 20 to 60 minutes, then sulfonating at 40° to 120°, allowing the product to settle and saponifying with sodium hydroxide. Polymerized sardine oil sulfonated with ten per cent concentrated sulfuric acid at 50°, saponified and salted out gave a soap containing 5.9 per cent sulfate and 58.1 per cent fatty acid. *J. Nippon Oil Technol. Soc.* 3, No. ½, 101-13 (1950), through *Chem. Abstracts.*

Foaming Washing Product

A washing composition with foaming properties is prepared by adding sulfonated cyclic hydrocarbons to polymerized urea. Seven hundred grams of sulfonated naphthalene, bleached previously with peroxide, are mixed with ten kilograms of polymerized urea for one hour at 45° to 60°. The product is pressed and cut as ordinary soap. French Pat. 940,117, through *Chem. Abstracts.*

Germicide and Insecticide

A product with good germicidal and insecticidal properties may be prepared by heating calcium sulfide with a pine oil containing a high concentration of abietic acid. The compound is then mixed with soap. Japan Pat. 175,517 through *Chem. Abstracts.*

Phenol Rodenticide

The addition of 2,4-dinitrophenol to flour, corn or other edible material produces a mixture which may be used as a rodenticide. The phenol may be prepared by slowly adding a solution containing 9.4 grams of phenyl alcohol to a mixture of 40 cc. of 67 per cent sulfuric acid and 27 cc. of 53 per cent nitric acid, at 30°. The solution should be maintained at 90° for eight hours, cooled, filtered, and the phenol recrystallized from ethyl alcohol. Ital. Pat. 440,114.

Insect Repellents

Some products, effective against mosquitoes and flies and non-irritating to the human skin, are as follows: dimethyl phthalate, dimethyl bicyclo (2.2.1) - 5-heptene-2,3-dicarboxylate, indalone, and 2-phenoxyethyl acetate. One compound useful as an application to clothing is 2,butyl-2-ethyl-1,3-propanediol. *J. Forestry* 48, 329-30 (1950).

Detergent Analysis

Detergents may be analyzed rapidly on the basis of molecular weight, and content of carbon, sulfur, oxygen and nitrogen. Special groups and constituents of the original dried product are determined, split portions are estimated, and a balance sheet of the C, H, O, N, and S is set up. Only a few separations with petroleum ether from neutral, or hydrochloric acid solutions, an extraction by petroleum ether after boiling or heating under pressure with hydrochloric acid, and some volumetric analysis for functional groups plus the quantitative balance sheet will identify the compound. Ethylene oxide, fatty alcohol and fatty acid condensates, sulfonated compounds, fatty acid amides and amines may be analyzed by this method. *Chem. Ztg.* 74, 16-20 (1950) through *Chem. Abstracts.*

Olive Oil Stability

Storage tests on olive oil indicate an increase in acidity where the temperature is about 30° C., however there is no change in acidity at 2° or room temperature. There was no difference in acidity between oil stored in glass or metal containers. The peroxides in glass stored samples, however, increased slowly at 2° and at room temperature. Olfactory and taste tests were more favorable with the oil stored in metal containers as compared with glass stored samples. *Fette u Seifen* through *Chem. Abstracts* 44, 7569 (1950).

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AHCOLEIN 810	Wherever highest quality red oil is required. Soaps, creams, emulsions, textiles, etc.	Distilled red oil. Almost colorless. F.F.A. 98-100%. Meets or exceeds U.S.P. specifications.
DETERGENT 240	May be used alone or compounded to form household and industrial detergents.	A synthetic, Arkyl Aryl Sulphonate. Unaffected by strong acids. Resists alkalies.

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SOAP PLANT OBSERVER

By John W. McCutcheon

POLYETHYLENE squeezable plastic containers are being used more and more to package a wide variety of products. The special features are lightness, unbreakability and ease of dispensing by squeezing. Preparations already using these plastic containers include liquid shampoos, deodorants, hand lotions, perfumes, liquid cleansing creams, suntan lotions, and even powders. The "bottles" are available in any shade and come with contrasting or matching caps. The surface may be plain, stippled, grained or frosted and can readily be printed. Disadvantages in use are price, plus the fact that if the packaged material is dispensed by squeezing, the bottle must be about 25 percent larger than normal to allow for the air space.

Plax Corp., Hartford, Conn., makes a standard line of "bottles" that range in price from about 6c each on the 2-oz. size in lots of 100,000 or more to 8c for the same size in lots of 5,000 or more. Caps, printing and color would increase these prices probably to 8 to 10c. Allow another penny for die cost on the first 200,000. The safety factor and convenience would well repay the user for any extra charge involved.

Now how about a liquid shaving cream in such a dispenser and change the script to read click click—squirt, squirt?

* * *

A problem of interest to the soap industry during this present crisis in world affairs is the effect on the industry if general hostilities broke out. Would the pattern of the last war be duplicated or have the intervening years added something new to the picture? For one thing, retail synthetics were not in such popular demand in 1941 as they are now. Plant facilities for manufacture were limited and the heavy duty type synthetic was unknown.

All soap making fats and oils

became scarce, ceiling prices were established and certain oils allocated on the basis of previous consumption. The first reaction was to lower the fat content of soap products and available synthetic detergents by building them with all available alkaline salts such as soda ash, silicate, etc. Laundry bar soaps were sold which had a fat content as low as 10 percent or about 25 percent of normal.

A flood of synthetic detergent materials appeared whose only excuse for existence was the fact that better products, which were also being produced at plant capacity were not available in sufficient supply to go around. Other plants which had been supplying the industrial field might have come to the rescue of the housewife but they found that their entire production was allocated to the use of the armed services. Still in all we managed to survive. To say that this situation could not repeat itself just because plant capacity for turning non-fat materials into detergents has quadrupled in the past five years, would be merely wishful thinking. Available plant capacity is merely one important phase of the situation. The supply of raw material is another phase just as important and is often the limiting factor. Each raw material must be considered as available to the detergent industry only in so far as it is not needed for more urgent use elsewhere; by the supply on hand; and by an industry's ability to produce more.

It is impossible to predict what dislocations might arise in a national crisis. When the writer visited the El Dorado gold mine plant at Port Hope, Ontario a dozen years ago, they were refining the radium and practically throwing away the uranium. Now they are practically throwing away the radium and refining the uranium.

Suppose then by some quirk of fate, sulfur became a strategic material. Sulfuric acid would be critical and the present bulk supply of synthetic detergents would be cut off. This condition would continue to exist until production was re-oriented to the new condition. The point of this discussion, is that any prediction based on known facts, however carefully made, is subject to drastic change, and adjustment. The coordinator next time must be prepared not only to allocate fats but must also have many other diverse materials to consider.

The alkyl aryl sulfonates for example depend on light petroleum fractions for the alkylation of benzene. Prior to use in synthetics these fractions were converted into gasoline which is a first class war material. However, at the present rate of consumption, all the petroleum fractions used for alkyl sulfonates in a year, would not be equivalent to the gasoline produced in four hours. It is very unlikely that petroleum fractions would ever be in short supply.

Benzene, however, is another story. The strong demand for its production for such products as phenol, styrene, aniline and nylon and as a solvent, plus its variable supply from coal tar, keep the purchaser on pins and needles. The recent rise in price

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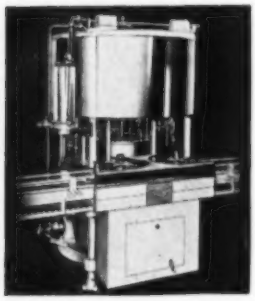

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Ask yourself these questions

● *What makes red oil red?*

The answer is color bodies and other impurities which are not removed from the fatty acids by the usual processes such as distillation and filtration. These impurities not only make the Red Oil red, but they give it the strong odor usually associated with this product. In addition, these impurities make the Red Oil unstable in color when heated in processes such as esterification and saponification.

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Distillation is not enough to remove the impurities from the fatty acids. The average commercial Stearic Acid shows this by its relatively dark color, and poor odor and color stability when it is used in making esters and high grade cosmetic soaps and creams.

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to 27c per gallon is indicative of the situation.

Synthetic benzene from petroleum is being manufactured presently, however, so that this important chemical may never reach a critical state in any national emergency.

Acid to date has not been a critical material, although it is used in huge quantities in any munitions program.

Caustic soda can be critical in spite of the fact that its basic raw materials are in plentiful supply. Chief cause of a tight situation on caustic, apart from the prolonged strike, is the large demand in many industries, notably synthetic textiles. The power consumed in its manufacture is also a factor. It is interesting to note, however, that to manufacture one pound of soap about one quarter as much caustic soda is required as to obtain the equivalent detergent value of an alkyl aryl sulfonate. If caustic ever became a limiting factor in production, soap would take precedence over synthetics.

Of other synthetic products, the alkyl sulfonates which at present are of minor importance in America, depend chiefly on petroleum plus SO_2 + Cl_2. None of these materials would be critical with the exception of chlorine. This latter possibly would be the limiting factor. Alcohol sulfates, sulfonated amides and monoglycerides are fat bearing materials and would be limited chiefly to allocations of coconut oil and to some tallow. In addition certain amide products prepared from the acid chlorides would be limited by the available supply of phosphorus. The detergent value of the latter product, however, would warrant allocation of this war scarce material in sufficient amounts to cover required industrial and military needs. It is unlikely that any part of civilian requirements could be met.

Synthetic detergents carry a great deal more builders than are required for soap of equivalent detergent power. A built soap for example may carry 5-10 percent polyphosphates, a built heavy duty detergent may carry as much as 50 percent. Phosphate salts during the last war were very scarce materials due to limited plant capacity. Very recently a great expansion has taken place in this industry which would indicate that there would be a cushion of material to fall back on. However, it still appears likely that this material, like caustic soda, would become limited on a power requirement basis. A situation of this sort would favor soap or mixtures of soap and synthetics.

The non-ionic detergents depend very much on supplies of ethylene oxide. Present capacity of this commodity is placed at over six hundred million pounds a year, of which the detergent industry takes only a small fraction. It is dependent for its manufacture on power so that it could be counted on to give only so much to the industry as war needs would permit. Soap, of course, would continue to be made in as large a quantity as the available fat supply would permit. If the industry were coordinated in its requirements for raw materials in a program designed to utilize the materials to the best available purpose, then it is entirely likely that there would be no drastic reduction in any one presently made product and that the supply of products would more than meet any emergency.

New Soil Suspending Agent

"Nu-Film," a new starch product that acts as a soil suspending agent, claimed to be more economical than other cellulose derivatives, was announced recently by National Starch Products, Inc., New York. Technical data and samples are available from the company's laboratory at 270 Madison Ave., New York 16.

The new starch, an acid ester derivative containing sodium carboxylate and sulfonate groups, is said to act successfully as a solid suspending agent when used with detergents. Whiteness retention tests on unsized cloth have shown good performance with "Nu-Film" in preventing redeposition of dirt on textile fibers, it is claimed, particularly when the product is used with alkyl aryl sulfonate type detergents.

West Antiseptic Soap Folder

A folder on its line of antiseptic soaps was issued recently by West Disinfecting Co., Long Island City, N. Y. The new West antiseptic liquid hand soap, containing hexachlorphene and lanolin, developed by West especially for use by food handlers and industrial workers is discussed at some length. The firm's antiseptic surgical soap is also mentioned. A bibliography of 15 references to antiseptic soaps is included in the booklet.

Odor Control Pamphlet

A new pamphlet on the subject of odor control was issued recently by the National Bureau of Standards, Washington, D. C. The principal factor in the control of odors in the home is the removal of the sources of odor and, in a real sense, the most important deodorant for domestic or personal use is soap and water, the pamphlet, which bears the title, "Control of Odors," states.

Safety Congress Oct. 16-20

The 38th National Safety Congress and Exposition is to be held Oct. 16-20, in Chicago. Sessions on industrial safety are scheduled for the Stevens, Congress and Morrison hotels; traffic safety sessions will be held at the Congress Hotel, and commercial vehicle safety sessions at the LaSalle.

Soap Off British Free List

Soaps, toothpastes, shampoos and other toiletries were recently eliminated from the "free list" of the British National Health Insurance plan. Banned lines include among other things medicated soaps. The move follows a survey of legitimate and illegitimate charges on the N.H.I. scheme arising from the prescription by some doctors, and the claim by some patients of these products. Formerly doctors in doubt preferred to prescribe and satisfy the patient—especially if the product were a borderline one. Now that a fixed list has been laid down, describing what are medicines and what are not, the doctor can only prescribe the banned items at the risk of having to pay for them out of his own pocket.

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The carton "Neverstops" after being fed, and there are a number of cartons in the machine at one time in different stages of filling and sealing. This continuous motion assures high production of accurately filled, neat and well sealed cartons.

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NEW PATENTS

The information below is furnished by patent law offices of

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402 Bowen Building
Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster, Allwine & Rommel by sending 50c for each copy desired. They will be pleased to give you free preliminary patent advice.

No. 2,513,187. Silver Cleaner, patented by Harry Linkletter, Englewood, N. J., and William Van Kirk, Richmond Hill, N. Y., assignors, by mesne assignments, to Ultra Chemical Works, Inc., Paterson, N. J., a corporation of New Jersey. A dry composition for silver-cleaning is covered comprising aluminum metal and an electrolyte consisting of a mixture of approximately 40 to 60 parts by weight of calcium hydroxide, 60 to 40 parts by weight of sodium bicarbonate, and 2.4 to 5 per cent of potassium chlorate based on the weight of the entire electrolyte.

No. 2,510,366. Rodent Repellent, patented by Luther L. Baumgartner, Yonkers, N. Y., assignor to The B. F. Goodrich Co., New York, N. Y. a corporation of New York. A rodent repellent composition is patented which comprises as the essential active ingredient 0.5 per cent to 10 per cent by weight of beta-isothioureidopropionic acid and as a carrier therefor an aqueous medium in which said active ingredient is uniformly dispersed.

No. 2,514,150. Insecticides Produced by Reacting Trialkyl Phosphates with Thio-Phosphoryl Halides and Their Preparation, patented by Alan Bell, Kingsport, Tenn., assignor to Eastman Kodak Co., Rochester, N. Y., a corporation of New Jersey. A process for preparing compounds is patented, having insecticidal properties which comprises heating a trialkyl orthophosphate with a liquid thiophosphoryl halide whereby the alkyl halide formed is driven off and a tri-dialkyl phospho thiophosphate is obtained.

No. 2,510,431. Insecticidal Composition Comprising a Dodecahydro Agridane, patented by William D. Stewart and John H. Standen, Yonkers, N. Y., assignors to The B. F. Goodrich Co., New York, N. Y., a corporation of New York. A dust composition toxic to fleas which comprises 0.1 per cent to 10 per cent by weight of a methyl dodecahydro acridane as the essential active ingredient and a pulverulent solid as a carrier therefor.

No. 2,510,510. Germicidal Detergent Composition, patented by Elwyn E. Mendenhall, Pittsburgh, Pa., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware. A germicidal detergent composition is covered which consists essentially of a water-soluble soap and a minor proportion of a glassy phosphate having a metal oxide to phosphorous pentoxide ratio of 1:1 to 2:1 and having a silver content effective to impart germicidal properties to said glassy phosphate when dissolved in water, said silver content not exceeding 5 per cent.

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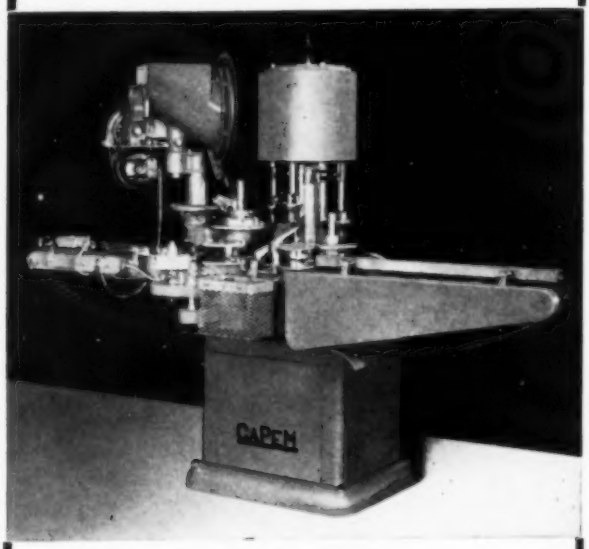

- Applies any type of standard screw cap or cover at speeds of 2000 to 10000 per hour.
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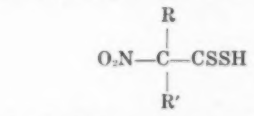
No. 2,510,724. Germicidal Composition Comprising a 3,5-Dimethyl-4-Nitrosopyrazole, patented by Norman K. Sundholm, Naugatuck, Conn., assignor to United States Rubber Co., New York, N. Y., a corporation of New Jersey. A fungicidal composition is described comprising an aqueous suspension of a 3,5-dimethyl-4-nitrosopyrazole in which the 1-nitrogen of the pyrazole nucleus is attached to a member of the group consisting of hydrogen, alkyl, aryl and aralkyl radicals, said aqueous suspension containing a dispersing agent.

No. 2,510,564. Triallyl Cyanurate and Insecticidal Compositions Containing the Same, patented by James R. Dudley, Cos Cob, Conn., assignor to American Cyanamid Co., New York, N. Y., a corporation of Maine. Patented is triallyl cyanurate.

No. 2,510,726. 1-(4-Sulfamylphenyl)-3,5-Dimethyl-4-nitrosopyrazole and Germicidal Compositions Containing It, patented by Norman K. Sundholm, Naugatuck, Conn., assignor to United States Rubber Co., New York, N. Y., a corporation of New Jersey. The patent describes as a new compound, 1-(4-sulfamylphenyl)-3,5-dimethyl-4-nitrosopyrazole. A germicidal composition comprising an aqueous suspension of 1-(4-sulfamylphenyl)-3,5-dimethyl-4-nitrosopyrazole, said aqueous suspension containing a dispersing agent.

No. 2,513,018. Nitrodithioacetates as Fungicides, patented by Everett E. Gilbert, New York, N. Y., assignor to Allied Chemical & Dye Corp., a corporation of New York. A fungicidal composition is covered comprising a carrier having associated therewith a heavy metal salt of a compound having the formula



wherein R is a member of the group consisting of hydrogen and the methyl group and R' is a member of the group consisting of hydrogen, the methyl and ethyl groups, said compound containing not over four carbon atoms.

No. 2,514,564. Chlorinated Terpene Sulfone and Insecticidal Composition Containing Same, patented by George Allen Buntin, Wilmington, Del., assignor to Hercules Powder Co., Wilmington, Del., a corporation of Delaware. The patent covers a chlorinated terpene sulfone containing at least 40 per cent chlorine.

No. 2,510,367. Rodent and Deer Repellents, patented by Luther L. Baumgartner, Yonkers, N. Y., assignor to The B. F. Goodrich Co., New York, N. Y., a corporation of New York. The patent describes a rodent and deer repellent composition comprising an active repelling agent dispersed in an aqueous solution of a dispersing agent, said active repelling agent being present in an amount from 6 to 25 per cent by weight and consisting of the oily product of the reaction of three molecular equivalents of butyraldehyde with one molecular equivalent of aniline, said oily product having a brown to red color and an index of refractivity of about 1.575.

No. 2,510,870. Insecticidal Composition Comprising 1.1-di-(4-Chlorophenyl)-2,2,2-Trichloro-Ethane and 1.1-Di (Monochloro-Phenyl)-Ethane, patented by Curtis E. Dieter and Bernard J. Thiegs, Midland, Mich., assignors to The Dow Chemical Co., Midland, Mich., a corporation of Delaware. The patent covers an insecticidal composition comprising as active toxicants 1,1 - di - (4 - chloro phenyl) - 2,2,2-trichloro-ethane and 1,1-di-(monochloro-phenyl)-ethane, and wherein the mixture of toxicants exerts a synergistic effect as regards insecticidal toxicity.

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Flake Nonionics

(*From Page 73*)

Detergency

THE surface active agents in this series have been evaluated both for ability to remove a carbon-type soil from cotton cloth and for ability to hold the soil in suspension after it has been removed. The first effect is referred to as carbon soil removal (CSR) and the second as whiteness retention (WR). Methods of measuring these effects have been described in a previous publication from these laboratories. (2)

To determine carbon soil removal, standard soiled cotton cloth is laundered with the detergent solution in a Launderometer. The turbidity of the wash solution is measured by means of a Lumetron Colorimeter and then translated into terms of weight of carbon removed by reference to a calibration curve. Whiteness retention is measured by placing unsoiled cotton swatches in a detergent solution containing a carbon dispersion. After washing, rinsing and pressing, the reflectance of the swatches is measured with a Hunter reflectometer and compared with the reflectance of the swatches before treatment. Both CSR and WR results are expressed on a relative basis, being referred to a standard detergent which, in this study, was a typical alkyl aryl sulfonate. This standard detergent has an arbitrarily assigned value of 100 for its performance at 140° F. in 0.25 per cent concentration in distilled water. Under these test conditions, distilled water has a CSR of 50 on this scale. A value of 200 indicates twice as much soil removed by the test detergents as by the standard.

The variation in CSR ability with concentration at 140° F. is shown in Figure 3. At 0.1 per cent concentration each of these materials gives superior performance over the alkyl aryl sulfonate at 0.25 per cent concentration and the same temperature. However, this superiority varies from a substantial increase with Pluronic L62 to a spectacular increase with Pluronic L64 back to a modest increase with Pluronic F68, indicating that the most efficient hydrophilic-hydrophobic ratio for detergency under these conditions is at or close to that of Pluronic L64. This is substantiated by the excellent CSR ability of Pluronic L44. In comparing these two materials, the higher molecular weight material gave somewhat better results.

As the ability to remove carbon soil varies with temperature, it is important to consider carefully the temperature of application for each product in this series. For example, Pluronic L64 and Pluronic F68 show gradually improving CSR ability as the temperature is increased to 160° F. Similar results are shown by nonionics A and B. The CSR ability of Pluronic L62, however, falls from a value of 215 at 115° F. to 138 at 160° F., while the value for Pluronic L44 rises sharply from 115 at 120° F. to over 300 at 160° F.

Each of the products in this series gives excellent values for whiteness retention under all the conditions of evaluation. At 0.05 per cent concentration in distilled water, each of the Pluronics has a WR value of 275 to 300, compared with an alkyl aryl sulfonate at 100 and high titer, 92 per cent soap at about 200. The Pluronics maintain this WR value at higher concentrations and at all temperatures between 120°F. and 160°F.

Summary

AN investigation of some typical chemical and physical properties of a new series of nonionic surface active agents, the Pluronics, demonstrates that the properties of these products, like all nonionic surface active agents, are directly related to the hydrophilic-hydrophobic ratio and the molecular weight.

The hygroscopicity, rate of solution, solubility and foaming ability all increase as the hydrophilic-hydrophobic ratio increases. The ability to lower the surface and interfacial tension of water decreases as this ratio increases. In the case of wetting ability, the wetting speed decreased with increasing percentage of hydrophilic agent at the lower temperatures, but increases at higher temperatures. For carbon soil removal, an intermediate hydrophilic - hydrophobic ratio gives best results. An increase in the hydrophilic-hydrophobic ratio also increases the melting point. In this series, it is possible to raise the melting point sufficiently to obtain a solid product which may be flaked in commercial equipment and still retain desirable surface active properties.

Increasing the molecular weight of the hydrophobic unit also raises the melting point and lathering ability. However, it decreases the rate of solution, the solubility and the ability to lower surface and interfacial tension. The product of lower molecular weight shows a more rapid improvement of wetting speed with temperature. It is somewhat less efficient in carbon soil removal.

All of the Pluronics are stable to precipitation by metal ions under a standard set of test conditions and all possess good whiteness retention properties.

The values presented illustrate the flexibility inherent in this new chemical system, which permits the production of nonionic surface active agents of maximum efficiency for many specific applications and which allows the formation of a nonionic detergent in flake form.

References

(1) Ross, John and Miles, C. D., *Oil and Soap, 18,* 99-102 (1941).
(2) Vaughn, T. H. and Suter, H. R., *J.O.C.S., 37,* 249 (1950).

Hooker-Union Sign

F. W. Dennis, director of industrial relations of Hooker Electrochemical Co., Niagara Falls, N. Y., announced recently the signing of a five-year contract with the Niagara Hooker Employee's Union for the company's plant at Niagara Falls. The nearly 50 items negotiated include: a general pay increase of 6 cents an hour; hospital and surgical benefits to include dependents, the company paying 80 per cent and the employees 20 per cent of the cost while the company will pay 100 per cent of the New York State Disability Insurance cost. Continuing over forty years of industrial peace at the Hooker Company, the new five-year contract agrees to no strikes, slowdowns or lockouts.

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29 years in business as one of America's leading manufacturers of soaps ONLY is a testimonial to the standard quality of our products.

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40%, 30%, 20% Coconut Oil

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Soft 40%, Hard 65%, Scrub 20%

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IT MUST ALSO SMELL GOOD!
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RE-ODORANTS
First choice for pleasantly perfuming bulk and hand spray insecticides at a cost of...
LESS THAN 2¢ PER GAL.
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Quality

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A . . . a clean quick method of making a Pine Disinfectant.

B . . . best way of stretching Pine Oil Supply during emergency.

C . . . concentrate saves shipping costs for both you and your customer.

Simply Add
1 Barrel (Coef. 20)
PINE INDUCIDE CONCENTRATE
TO
3 Barrels WATER

AND YOU GET 4 BARRELS PINE ODOR DISINFECTANT (Coefficient 5)

The advantages of obtaining your Pine Disinfectant this way are three-fold.

FIRST: You are assured a supply of Pine Disinfectant in the face of the acute Pine Oil Shortage.

SECOND: You need no special equipment — simply add Pine Inducide Concentrate to water — agitate thoroughly — the result a coefficient 5 Pine Odor Disinfectant, clear light amber in color.

THIRD: You save the cost of shipping water and barrels.

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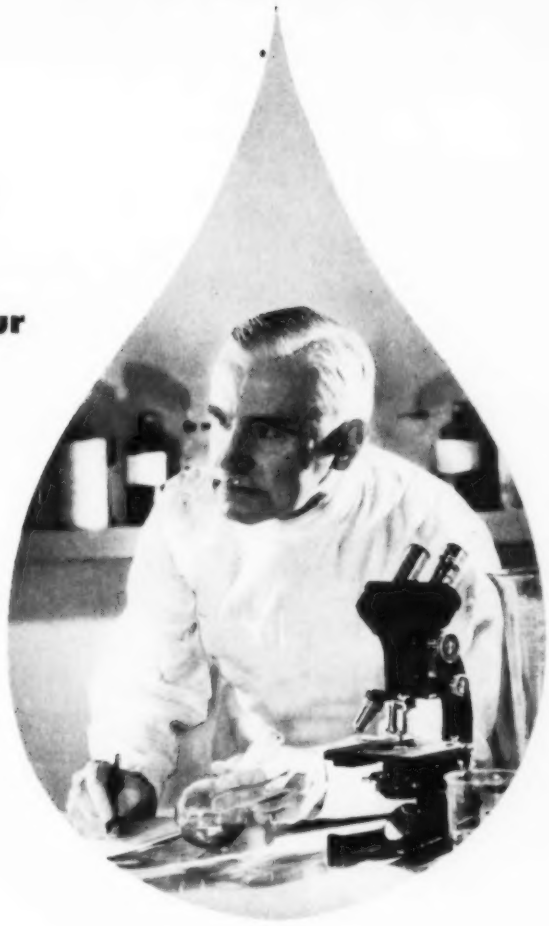

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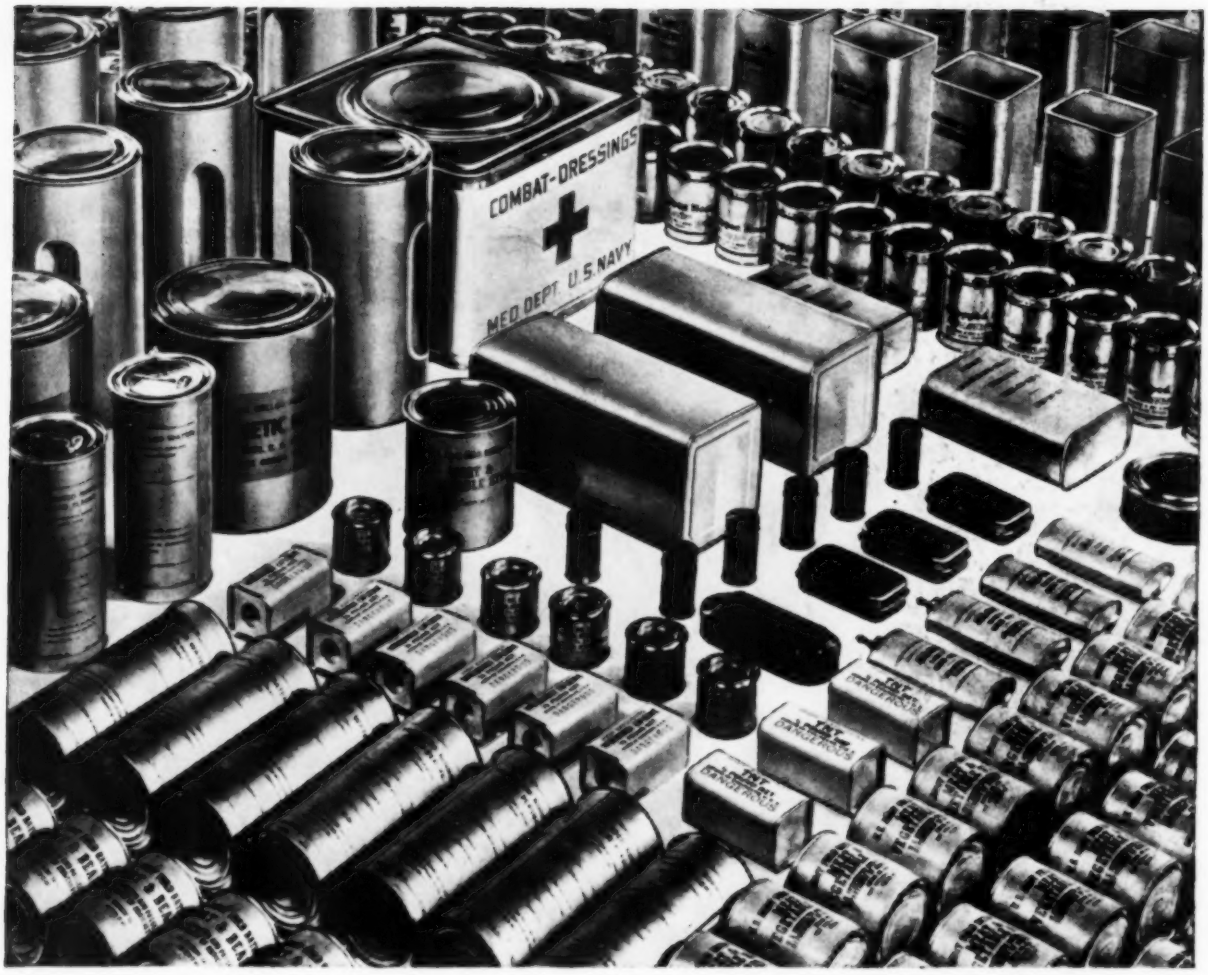

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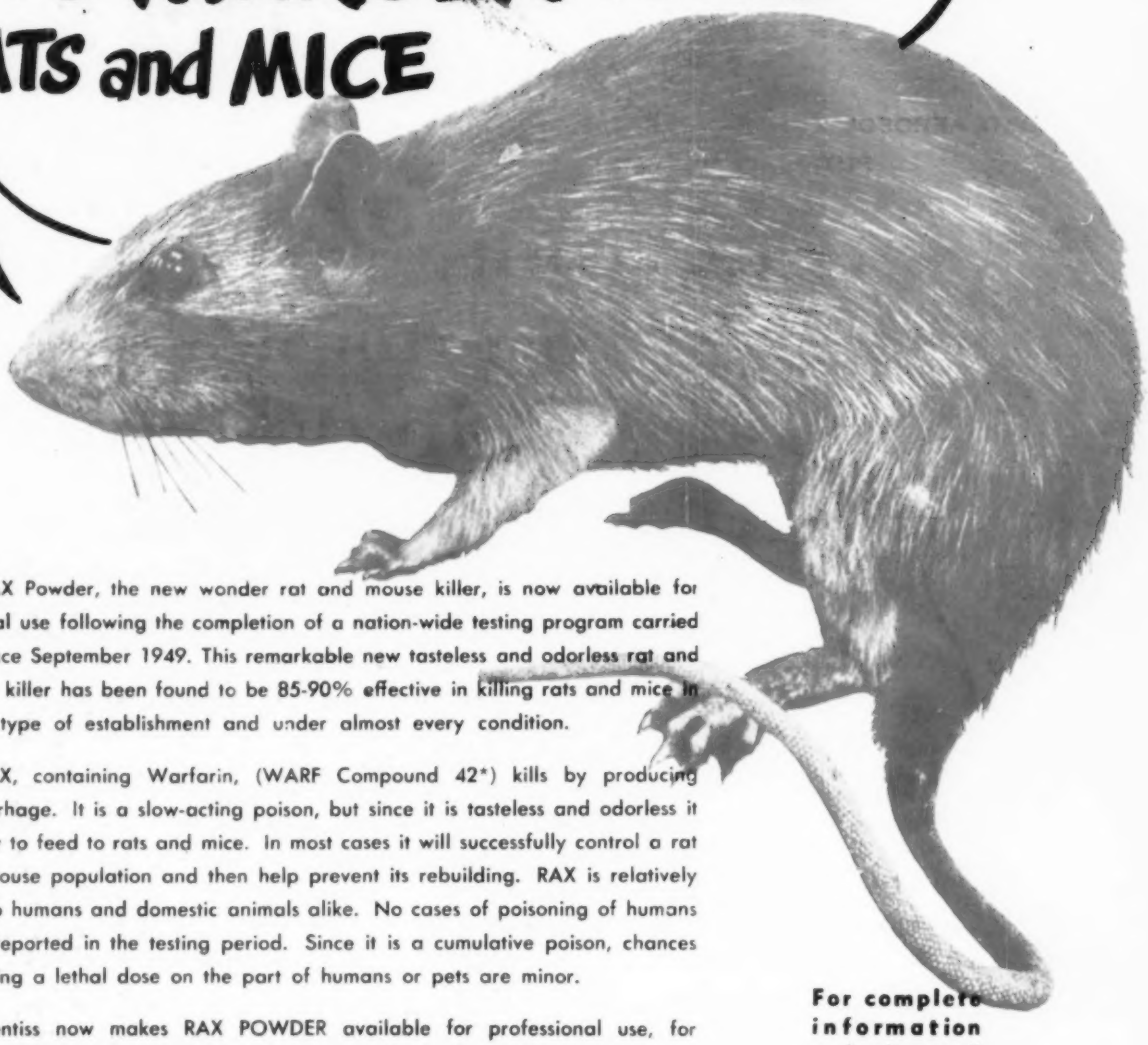

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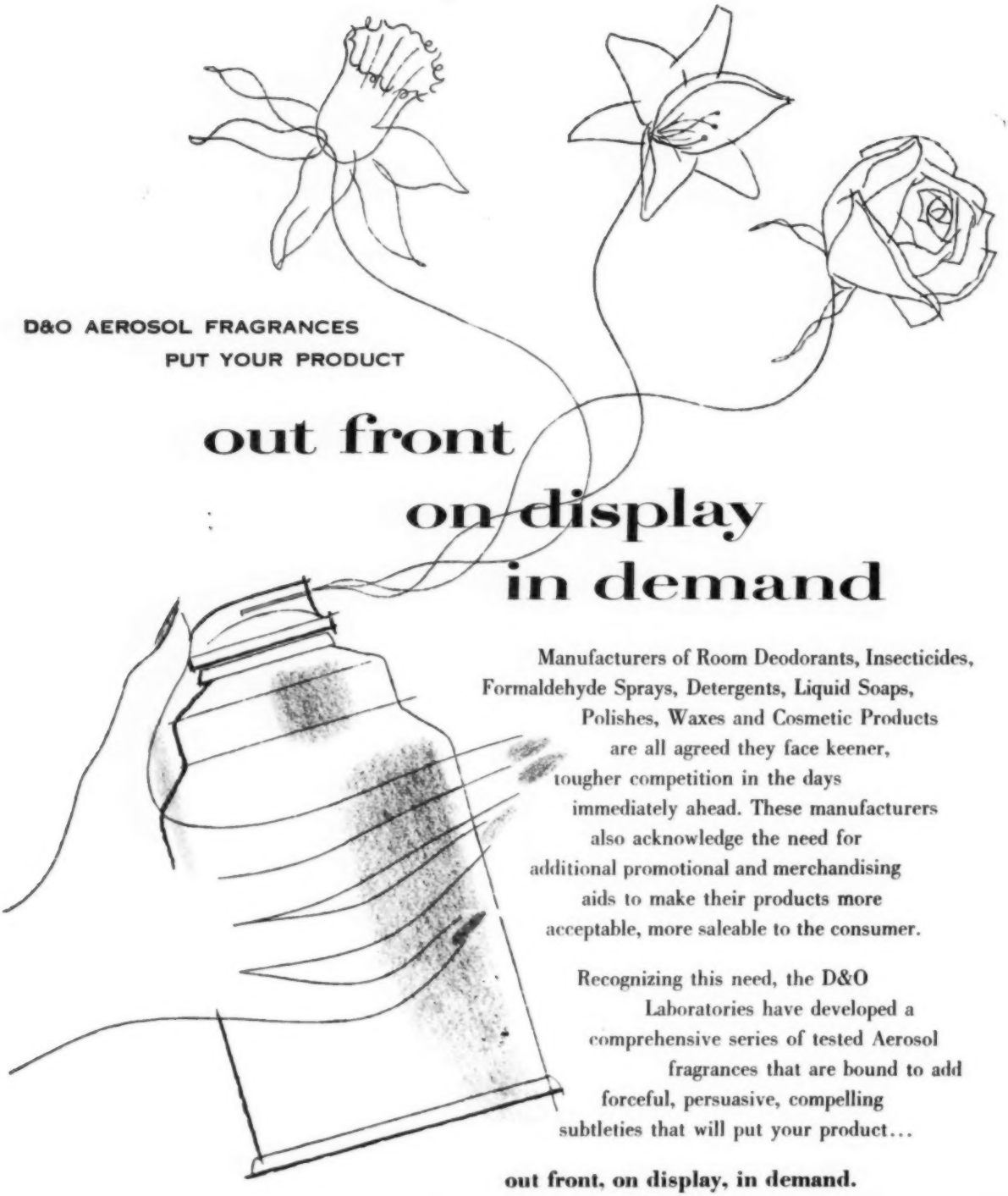

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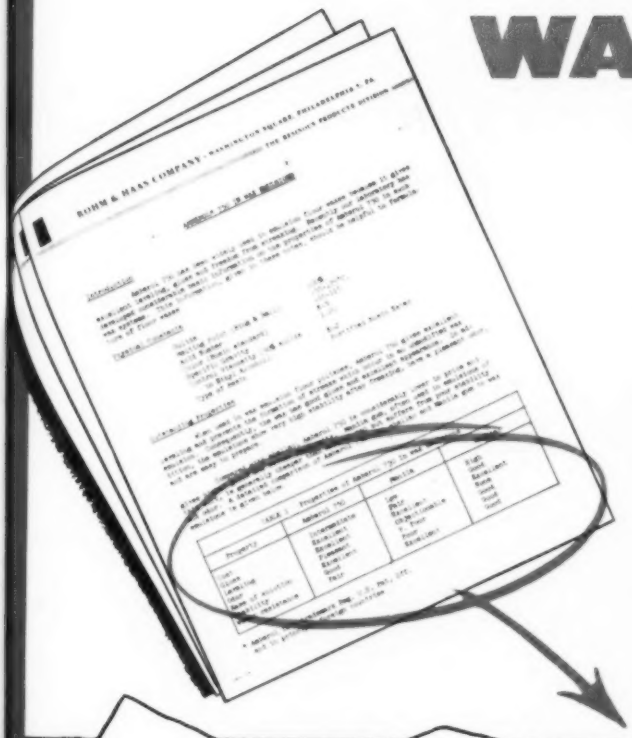

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Already in wide use, AMBEROL 750 is uniform, clean, available, easy to combine with wax emulsions. Details of this low-cost synthetic resin—properties, advantages, suggested formulations—are yours for the asking. Just clip and mail the coupon.

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Property	Amberol 750	Manila	Shellac
Cost	Intermediate	Low	High
Gloss	Excellent	Fair	Good
Leveling	Excellent	Excellent	Excellent
Odor	Pleasant	Objectionable	None
Ease of solution	Excellent	V. Poor	Good
Stability	Good	Poor	Good
Water resistance	Fair	Excellent	Good

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SANITARY PRODUCTS
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THE boom in home building, shackled by shortages of materials and stiffer credit restrictions, is reported to be tapering off and with it, perhaps, a very substantial market for floor care products of all types. The heavy demand for floor waxes, polishes, floor machines, applicators, brushes, etc., by the several million families who have acquired new homes in the past four or five years will continue as a large re-order market. But building and the new business of floor conscious new home owners is on the wane, reports from several major population centers indicate.

Besides pride in the appearance of and the desire to protect new and attractive floors, one of the important stimulants to the greater use of floor products has been the easy availability of flooring machines. They can be bought for prices in line with most electrical appliances, or better still from the standpoint of the new home owner, rented for as little as 75 cents a day in most any neighborhood hardware store. The floor machine rental idea has been almost as great a bonanza to the manufacturer of floor care products as the free camera was to the film industry in an earlier day. The net result of making floor care easier and better with improved, easily available products for floor conscious home owners is greater product sales.

With the reduction in the number of new homes being built, manufacturers of floor care products of all types will have to devote an increasingly larger share of their promotional and sales efforts to the industrial field. In this direction, the aid of the distributor can be strengthened greatly through the use of floor care films and literature and actual demonstration of improved floor maintenance methods. The presence of representatives of distributors and their customers at gatherings at which these presentations are given can work toward greater development of the industrial and institutional market.

* * * * *

THE shortage of steel drums has reached the point where manufacturers of chemical specialties are being forced to require deposits on some sizes as in World War II. Returns of all sizes, particularly 15, 30 and even five-gallons, are being urged by manufacturers whose sources have been hit badly by the steel shortage. The situation is developing into one of no returns—no shipments.

* * * * *

IF our observations are not inaccurate, now—right now—might be an excellent time for quite a few manufacturers of germicides, insecticides, and allied products to take stock of their advertising claims. To us, it seems that too many products are "inching up" on the truth as it were. As time goes on, claims seem to go a little further, and then a little further still, until they get dangerously near the borderline and once in a while cross over. Knowing full well that everybody wants to take full advantage of every possible favorable claim when selling in competition, some would appear to be too daring in this respect. And not all those who have come to our attention are small fry.

Some are relatively large firms who we believe know the score and should be more conservative with their claims. That the USDA, and what is more important where advertising is concerned, the Federal Trade Commission, are cognizant of this trend, we have little doubt. That the latter might decide to act could be a definite possibility. Accordingly, we feel that a re-evaluation of claims as of now might be the part of discretion in a number of directions.

MILDEW PROBLEMS

By Milton A. Lesser

FARMERS, lumbermen and food processors have long known of the heavy toll paid to destructive fungi. Only lately, however, has the general public begun to appreciate the heavy price exacted by mildew and other molds. The first inkling came during the war when people began to hear of the vast quantities of materiel that were being destroyed by the organisms, sometimes even before the essential equipment reached our men in the Pacific area.

Now it is realized that fungi are responsible for the heavy losses associated with the dry rot of buildings and timber, the decay of wharf pilings and fishing nets, the deterioration of rope and cordage and, much more personal, the mildewing of shower curtains, upholstery, wallpaper, shoes and other types of leather goods, books and awnings in the home. Conservative estimates (1) put the cost of mildew damage at more than 100 million dollars per year. Government experts (2) point out, for example, that enormous losses are caused, both industrially and in the household, by the deterioration of cotton fabrics due to the growth of mildew. However, the fungus problem is not only of money alone. It is impossible to calculate the saving of life that results from the use of dependable, rot-free fire hose, scaffold rigging, safety belts and the like.

Mildew Problem Widespread

VARIOUS kinds of destructive fungi cause rotting and decay at an alarming rate wherever high humidity and warm or hot temperatures are combined. (3) In contrast to the old belief that fungus damage was a problem only in the semi-tropical sections of the South, it is now recognized that 75 per cent of the United States is vulnerable to mildew, especially during the summer months. (4) Season, however, is no barrier where the relative humidity is 70 per cent or more. Given the proper degree of humidity, mildew can attack indoors, even in winter. (1)

From this, it is obvious that there is a great need in the United States for efficient fungicides and mildew preventives. In addition, as noted by Block, (5) there is a potentially large export market for such products since there are many areas of the world where mildew-encouraging conditions prevail.

Certain industries have forged far ahead in the development and testing of fungicides to meet their particular needs. Notable in this connection are the agricultural fungicides (6) and the wood preservatives used to treat timber and lumber. (7) The requirements of the paper industry are also being met (8) and the food packers are becoming keenly aware of the importance of antifungal agents to prevent spoilage. (9)

Because they tie in so closely with the needs of the individual consumer, the fungicides developed for the textile industry are especially important. As brought out in Horsey's (10) survey, textile technologists have long appreciated the value of mildew-proofing compounds. In response to an inquiry, 67 different potential applications for fungicidal finishes were listed by these experts. These included treatment of back-sizing for rugs, beachwear, shoes, blankets, book cloth, cotton fabrics of all types, furniture

The canvas bucket and webbing at the left have been protected against mold decay by one of the "Cunilates" developed for the Air Force by Scientific Oil Compounding Co., Chicago. Comparing them with similar items which almost completely disintegrated after 28-day soil burial test, is Victor N. Kalberg, who developed solubilizing technique. Active ingredient in the "Cunilates," available in permanent and non-toxic solutions and emulsions, is "Milmer 1," Monsanto Chemical Company's Copper 8-quinolinolate. The "Cunilates" have been approved for many other government and service specifications of leather, canvas, cordage and plastics products.

The choice of a mildew proofing product depends generally on the type of material upon which it is to be used since these products are specific in application. Factors to be considered in making mildew proofers for the home include freedom from toxicity, irritation, odor

upholstery, hat bands and felts, leather products, suspenders, Venetian blind bindings, and draperies.

Even more indicative from the consumer viewpoint is the department store survey cited by Turrentine. (1) Despite the fact that this study was made when the public was not so cognizant of the mildew problem, 41 per cent of those answering the questionnaires stated that the mildew-proofing of vulnerable products would increase sales appeal. An even larger proportion, 53.8 per cent, listed various types of materials in their stores which they would like to see mildew-proofed. As a matter of fact, 23 per cent of these stores were already carrying some anti-mildew treated items.

Following in a logical sequence, the latest phase of antifungicide developments is the formulation of products especially designed for the sanitation specialties field and the home market. As remarked by one authority, (5) drug, hardware, grocery and department stores offer numerous outlets for distributing products of this sort.

In discussing fungi, reference is made to mold, mildew, rot and decay. In general, mold and mildew are synonymous terms describing surface growths. Fungi of this type may cause damage but they are generally objectionable because they cause discoloration, give rise to musty odors and cause changes in various desirable properties such as waterproofness, flexibility and electrical resistance. (11) The oganisms of rot and decay are not so evident. They grow beneath the surface and may cause considerable damage or complete deterioration.

Actually, all fungi are simple plants that are unable to synthesize their own food and must therefore decompose organic matter in order to obtain nutrition. It is generally believed (12, 13) that the breakdown caused by fungi, as in the case of cellulose, is enzymotic in nature. It should also be stressed that a single fungoid growth is capable of throwing off numerous powdery spores. These spores can remain dormant over long periods, but burst forth into active growth when favorable conditions appear. (3) This is the case when goods are put away before they are dry and are stored in poorly ventilated places where they remain damp for long periods, thus providing conditions suitable for the germination of fungal spores. (11)

By studying the life cycle of fungi and by determining the conditions that promote their growth, it is possible to devise methods for controlling mildew and decay. Both physical and chemical methods are used. By regulating temperature and humidity it is often possible to suppress fungal growths. (4) More commonly, however, chemical methods are called into use.

The selection of a suitable fungicide is determined by a number of factors, particularly the type of material upon which it is to be used. It has been pointed out (11) that few fungicides are suitable for treating any wide range of materials. Thus, the fungicides used to prevent the blights and mildews that affect foliage and fruit are different from those meeting the requirements of wood preservatives. These, in turn, are generally different from the fungicides employed in textile treatments. Although certain antifungal agents used by the textile industry may be used in making consumer products, additional factors must be taken into consideration when formulating fungicides for home, factory and institutional sanitation. Freedom from toxicity, irritation and odor are among the characteristics required in these newer products.

Various tests are available for determining the suitability of a compound for a specific purpose. Most important, of course, are those designed to determine basic fungicidal or fungistatic action. A number of such tests are available (4) and modifications and improvements are constantly being proposed. (14, 15) However, as remarked by Hochstadt, (12) tests for evaluating these agents require further standardization and quite often there is confusion when the results of the different methods are compared.

Fungicides can be classified in several ways. By one simple system the chemicals could be classed as solvent-soluble or as water-soluble. A large proportion of the products now in use are employed as solutions in a suitable organic solvent. Some of them, however, including consumer type products, are provided as dispersions or emulsions with water. (16, 17, 18) More economical, convenient and safer, and with certain advantages from the standpoint of consumer formulations, are the water-soluble fungicides. It is quite significant that a number of such water-soluble forms have been developed recently. (19, 20)

More commonly, however, fungicides are classed according to their chemical nature. Those that are of importance in this discussion may be divided into three broad groups. In the first group are the metallic compounds, notably those of copper, mer-

cury and zinc. The second group includes the phenolics; the most important being the halogenated and phenylated derivatives. The third category incorporates miscellaneous compounds such as salicylanilide and the various volatile fungicides.

Copper Compounds

COPPER compounds are toxic to cellulose-destroying fungi. A recent report (21) on fungicide-treated cotton fabrics indicates that of the different compounds tested, only the silver and copper compounds stood up well after two-year field tests. Of the various copper soaps that have been used as rot-proofing agents, copper naphthenate rated the highest in the comparative tests. (22) According to Hindson and Mortensen, (11) copper naphthenate, because of the presence of the naphthenic radical, is generally considered to be the most efficient fungicide of the copper compounds and to possess the greatest toxicity to the mildewing fungi.

Extensively used, especially during the war, copper naphthenate is effective, inexpensive, safe and easy to apply in solutions of cheap organic solvents. It also imparts water-repellent properties to fabrics. (23) Unfortunately the compound has an unpleasant odor and a tendency to stiffen cotton goods. In addition, it is said (11) to accelerate actinic degradation of cellulosic fabrics.

Of the various other copper fungicides, it seems that most attention is being focused on copper 8-quinolinolate. Valued as a textile fungicide, (24, 25) there are indications that this compound may have other important applications in the fields of leather processing, electrical insulation, and in protective coatings and plastics. (26, 27) When used in textile treatments, copper 8-quinolinolate is effective in low concentrations, is resistant to leaching and sunlight, is almost odorless, and is low in toxicity. (23)

Other copper fungicides are attracting attention. One such, copper 3-phenylsalicylate, is a new compound developed primarily for application to such textile materials as canvas awnings, tarpaulins, shoe liners, conveyor belts, shade cloth, wearing apparel, fish nets and cable insulation. The producer (28) of this compound suggests its consideration for any use requiring effective antifungal action, lack of odor, non-irritation and sensitization of skin, and a high degree of permanence. It is also effective in the preservation of cork gaskets, wood, leather, paint and paper.

A major disadvantage of the copper fungicides is their tendency to impart color, generally a blue or green tint, to the treated product. To circumvent this fault, zinc compounds are sometimes used. Zinc naphthenate, for example, is thus employed instead of copper naphthenate in the rotproofing of textiles. (29) It is, however, only about half as effective as the compound it replaces, hence has a greater tendency to produce stiffness.

The high toxicity of the organic mercurials limits their usefulness for some purposes but they find many valuable applications as fungicides. The phenyl mercurials, for example, exert strong fungicidal influence even in very low concentration. (30) Compounds of this class have been used as wood preservatives, mildew inhibitors, as fungus-proofers for cork compositions, in tanning, in paints and in paper mills. (5, 31)

The value of the phenyl mercurials for the mildewproofing of cellulosic fibers has been indicated by Borghetty in a report in the September, 1945 issue of *Rayon Textile Monthly*. Referring specifically to products sold under the "Puratized" brand (General Dyestuff Corp., New York), he gave illustrative examples of how these mercury compounds could be used to treat various types of fabrics. Thus "Puratized LN" could be used to impart semi-permanent antimildew effects in cases where the "feel" of the fabric, and color and toxicity are important requirements. Easy to apply, "Puratized N5-D" was described as particularly suitable for use with water repellents, while "Puratized PC" was suggested for use with alkali-soluble cellulose finishes. Of more recent origin are the pyridyl mercuric salts which are suggested (32) for protecting textiles, paints, varnishes, lacquers and wax, cork, felt and leather and oils and greases.

Phenolics Are Important

THE phenolics occupy an important place among modern fungicides. Indicative are the industrial products known as "Dowicides" (Dow Chemical Co., Midland, Mich.). These are chlorinated and phenylated phenols, or combinations of these chemicals, and their sodium salts. In free phenol form they are soluble in organic solvents and as the sodium salt they are water-soluble, thus affording a wide range of utility.

The halogenated phenols, particularly the chlorinated compounds, are employed quite extensively as fungicides. It is said (11) that tri-, tetra-, and pentachlorophenols are toxic to fungi at concentrations of the order of 0.01 per cent. Because of its efficacy as a wood preservative, pentachlorophenol has assumed an important position as an industrial fungicide with a growing number of applications. Unfortunately, all three compounds have certain disadvantages, such as a tendency to leach out of the treated materials when exposed to weathering. They also are corrosive to a number of metals, particularly steels.

These disadvantages are overcome in the chemical, dihydroxy-dichloro-diphenyl methane, which is known commercially as "Compound G-4" (Sindar Corp., New York). It is also available under the name of "Preventol GD" (General Dyestuff Corp., New York). Found to be relatively nontoxic and nonirritating, (33) the compound was rated very high as a fungicide in a series of tests (34) that included severe soil burial and soil suspension tests. Since its introduction, "Compound G-4" has greatly expanded its range of utility, which now includes various applications in consumer type fungicidal products.

Also worth noting is sodium pentachlorophenate. Available under the trade name of "Santobrite" (Monsanto Chemical Co., St. Louis), this compound is of interest because, in addition to its industrial applications, it has found important use as an antimildew agent for laundries. (35) Of

course other halogenated phenols have been developed and studied with respect to their fungicidal activity. (36, 37)

Salicylanilide as Fungicide

THE third or miscellaneous group of fungicides is represented by salicylanilide. In a strict sense, it could be classed with the phenolics, but it has rather destructive characteristics. Preparations of this compound are available under the "Shirlan" trade mark from E. I. du Pont de Nemours & Company, Wilmington, Del. Developed (38) in England in 1928, tests indicate that salicylanilide is toxic to many fungi at concentrations of 0.01 per cent. (11) In addition it has practically no odor or color, is nonirritating and low in toxicity. Originally developed for textile applications, the various Shirlan fungicide products also find other uses. A solution of 0.5 ounce of salicylanilide per gallon of isopropyl alcohol, applied by dipping or spraying, is suggested (23) as a means of protecting blankets, curtains and similar items from mildew. While highly effective for protecting goods during storage and shipment, the compound is readily leached out of treated material during exposure to weather and is removed by laundering and dry-cleaning.

Applied from organic solvents or ammoniacal solution, salicylanilide may also be used as dispersions in water. Improved methods for making such dispersions have been described in a recent patent. (18) This is achieved by combining the fungicide with an emulsifying agent.

Volatile Fungicides

THERE is growing interest in the potentialities of various volatile fungicides. Such compounds are especially useful in sealed packages, closed spaces, and for various other special conditions. In one series of tests cited by Hindson and Mortensen, (11) paraformaldehyde proved to be the most toxic to fungi. They note that some workers have suggested that terpineol and metacresyl acetate vapors may be satisfactory fungicides under some conditions. Known as "Cresatin" (Sharp & Dohme, Inc., Philadelphia) and used as a drug for the treatment of mycotic infections, metacresyl acetate has found employment as a fungicide for the interiors of optical instruments. Block (5) mentions ethyl mercuric chloride, orthochlorophenol, benzaldehyde and 2-chloropyridine as additional volatile materials having fungistatic vapors.

Laboratory tests indicate that camphor vapors are ineffective against fungi. (11) Very interesting, however, is recently reported work (39) which shows that paradichlorobenzene is an effective agent for the control of mildew as well as an efficient mothproofing material. It has been found that cotton, leather, woolens, paper and other materials susceptible to mildew attack under warm humid conditions may be protected from such damage in an atmosphere saturated with paradichlorobenzene vapors. As in the use of para for mothproofing, it is essential that the storage closet, chest or package be kept as air-tight as possible. The stored items may be sprinkled with the crystals as they are packed, or crystals or blocks of paradichlorobenzene may be suspended at the top of closets so that the heavy vapors will settle and saturate the air of the confined space.

With a growing agricultural and industrial market, manufacturers are also devoting considerable attention to the potential market offered by the householder and the sanitarian. As noted by one expert (5) certain properties are needed to meet the requirements for such products. Preferably it should be colorless and odorless, nonirritating and not highly poisonous. It should provide a residual action and be effective against a wide variety of molds.

When properly formulated, such a fungicidal product will find many uses in the home. In the kitchen, for example, its use will help to prevent odors and mold growth in refrigerators, bread boxes, garbage cans and on shelves of food closets. In the bathroom, it could serve as an additional deodorizing and sanitizing aid and to prevent mildew formation on shower curtains, tiles and painted surfaces. In the laundry, such a product would be of great help in preventing mildew and odor in wet clothes before drying or ironing. It could be of great help toward diaper and diaper can cleanliness and might well serve as a rinse for stockings and other garments to prevent "athlete's foot" and other fungous infections. A compound of this sort would be particularly valuable for treating stored items and storage spaces, thereby preventing mildew and musty odors in clothes, bedding, blankets, rugs, shoes, luggage and furniture. Used to spray summer houses, cabins and such, the antifungal material will combat the mildewing odors often associated with such structures.

To the professional sanitarian and maintenance man, a product of this class would serve as an antimold wash for walls and other surfaces in food plants, bakeries, breweries and the like. It use on walls prior to painting could prove an effective means of retarding surface molds. Deterioration of mops, wash cloths, wash brushes and similar sanitary equipment could be greatly reduced. Numerous other uses readily suggest themselves to the alert worker.

An approach to the exploitation of this vast home and institutional market has already been made. Thus, a solution of 0.5 per cent of salicylanilide in isopropyl alcohol has been recommended (5) as suitable for general household use.

In at least two instances, suitable antifungal products were developed and tested by larger chemical companies and were then turned over to other organizations for sales and distribution. One such product, with many desirable characteristics as a general household and maintenance fungicide, was discussed in some detail in a previous review on mildew preventives. (4) Then known as "Nuodex 87," this product is now being merchandised exclusively under a private brand name by G. N. Coughlan Co. of West Orange, N. J. It consists of an aqueous dispersion of dodecylamine salicylate and dodecylamine lactate. Similarly, the product known as "Mil-Du-Rid" is now being distributed

(*Turn to Page* 139)

New Hood

HOUSEHOLD CHEMICAL

OPERATIONS at the new household chemicals plant of Hood Chemical Co. in Fullerton, Pa., pictures of which appear on this and accompanying pages, are beginning to shape up, according to Ralph Wetzel, manager of the plant. Considering that the building wasn't designed originally to house a household chemicals manufacturing operation and that the plant's staff is composed of a new crew of men who have had no previous experience with that type of work, the smooth functioning of the operation is quite a feat.

The plant now has three lines in operation, for which additional parts for some bottle line machinery had to be ordered, or new parts made where possible. The new employees, according to Mr. Wetzel, are beginning to handle themselves like veterans.

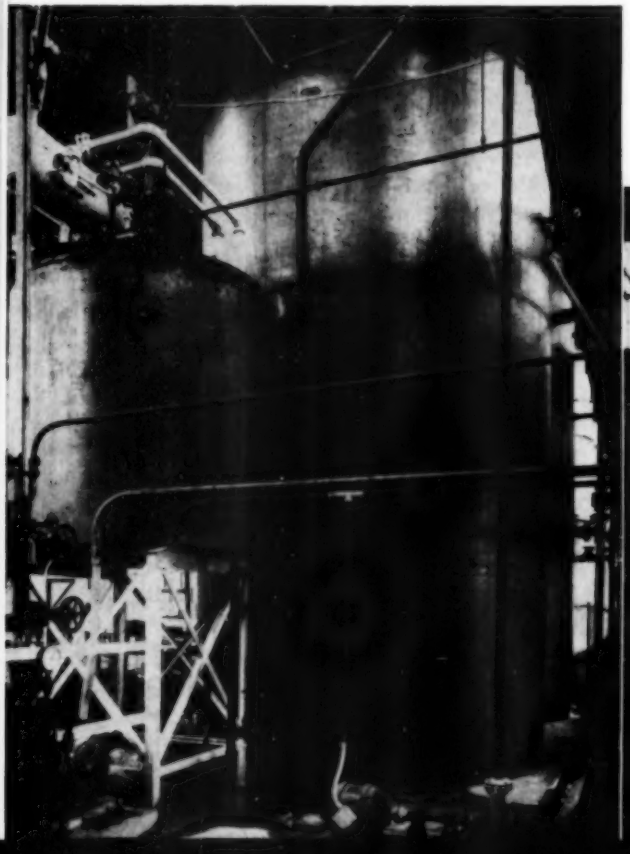
Hood Chemical Co. with headquarters in Philadelphia, manufactures and distributes a full line of household products. The Hood line includes "Zero", an all-purpose, liquid household cleaner; "33 Bleach and Disinfectant"; "E-Z Liquid Starch"; and "Aunt Phoebe's Household Ammonia". Distribution is handled principally through wholesale grocery houses and jobbers. At present areas of distribution are mainly in the Middle West, the South and part of the Eastern Seaboard, but Hood is rapidly expanding its territories and expects to have national distribution within a short time.

Although Hood is an old and established name in the household chemicals field, present organization of the company dates back only to 1948. At that time R. Y. Cutler became president and active head of the company. Other officers are P. E. Neff, vice president; N. A. MacDonald, treasurer; Jack Rosfeld, secretary; and Ben Kunin, sales manager.

An aggressive advertising campaign in support of Hood products in all areas where these products are distributed was one of the early decisions made by the new executives of the company. The combination of continuous advertising coupled with the activities of a hard-hitting sales force has had much to do with the rapid increase in the sales of Hood products during the past two years.

At the present time Hood Chemical Co. operates two other plants in addition to the new operation at Fullerton. These plants are located at Lisbon, Ohio, and Jacksonville, Florida. The Jacksonville plant manufactures the full Hood line, including bleach, ammonia, cleaner and liquid starch. The Lisbon plant manufactures liquid starch, bleach, and cleaner as well as the Crescent line of laundry sours made for commercial sales to laundries.

Hood's new Fullerton plant is located on the banks of the Lehigh River a few miles from Allentown. An important factor in selecting this site was the fact that it provides easy access to all the important Eastern markets, thus helping to reduce distribution costs. The tracks of the Lehigh Valley Railroad run alongside



Left: Small tank shown in foreground is used in the mixing and cooking of liquid starch which is heated to a temperature of 190 degrees. Huge tanks shown in the background are part of a group used for chlorinating, diluting and storing raw caustic. Below: This is an over-all view of one section of the new Hood plant. Area in foreground is used for storage of chemicals used in the preparation of household products as well as for bottles, caps and other supplies used on the bottle lines. Bottle lines are in the far background. Tanks on right are used in the preparation of bleach.

PLANT

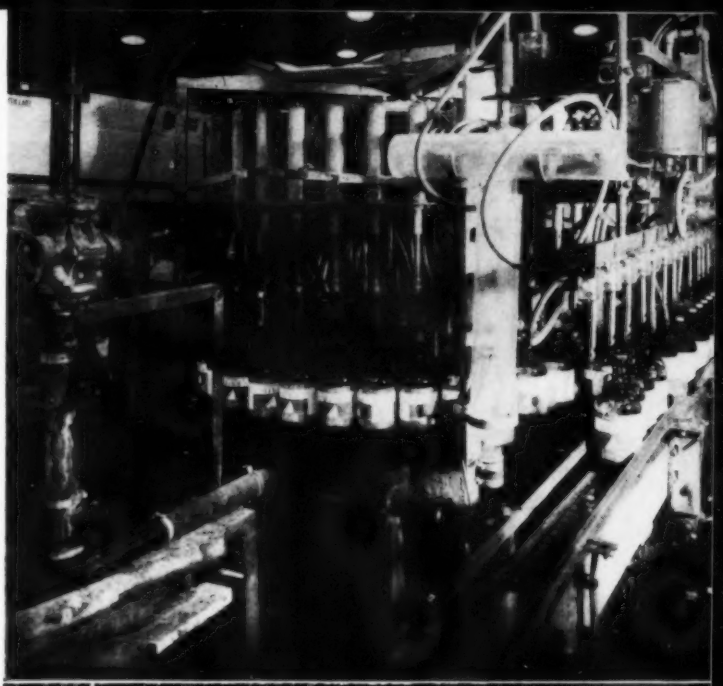
the plant, and a siding from this road makes it possible to unload carload lots of chemicals, concentrated starch, bottles and other supplies directly from the cars into the plant storage facilities.

Shipment of Hood products from the Fullerton plant is done mainly by trailer trucks, and a network of excellent paved roads in this area greatly facilitates freight shipments. The plant itself has loading facilities for as many as five trucks at one time.

Other favorable factors in the Fullerton site included availability of electrical power and water supply, as well as an adequate labor pool for operating the plant.

Three of the principal Hood products are now produced at the Fullerton plant. These are "Zero Cleaner," "E-Z Starch" and "33 Bleach and Disinfectant". (Household ammonia is manufactured only at the Jacksonville plant.)

In connection with the manufacture of bleach two huge tanks, each

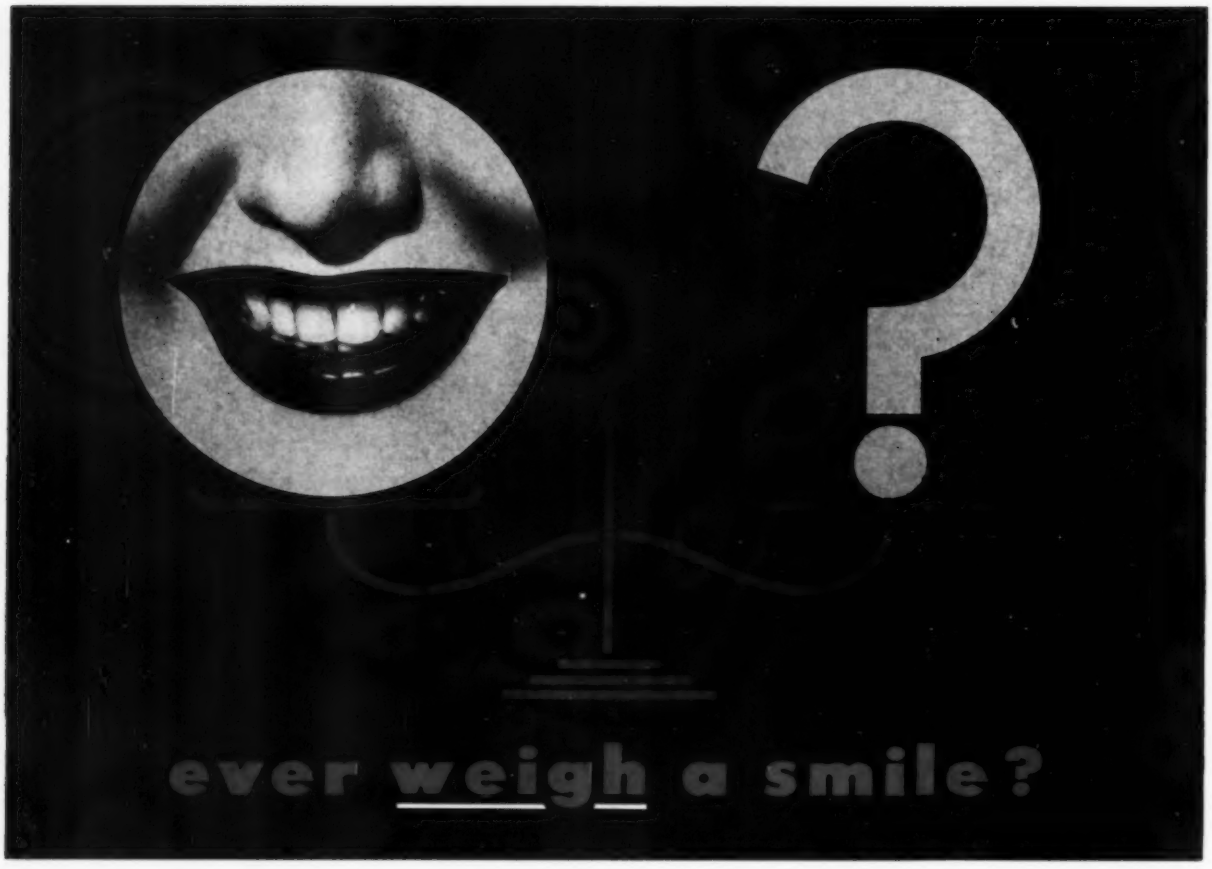


Right: The 30-head International filler shown in this scene at the Hood plant is filling labeled half-gallon bottles of bleach. Empty bottles move by conveyor from the left of the picture. Row of capped bottles indicates where filled bottles re-enter the line. Capped bottles have actually not reached the Resina capper shown at the right and beyond the filler. Row of tube-like projections on the right of the machine make it possible to transform filler into 12-head, straight-line filler for gallons.

Right: Filled and capped quart bottles of bleach are packed for shipment in this scene. Thirty-six head U. S. Bottler filler and Consolidated Machinery capper are shown in the background. Conveyor on the left carries empty cases from unscrambler to end of the bottle line for packing.

Lower right: The loading platform at the Hood plant, has facilities for handling five trucks at one time. Loaded pallet in center shows how cases of Zero cleaner are tied-in to prevent slipping. Fork truck on right is moving another pallet load directly into waiting truck. Pallets shown in this picture are conventional type which require unloading by hand.

Below: One end of the half-gallon bottle line. Workman is dumping bleach bottles in the unscrambler unit which sends bottles in single file through the labeler, at left. Empty cases are carried by conveyor to end of bottle line where they are refilled. Tank in background used in preparation of Zero household cleaner.



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of 15,200 gallon capacity, are used for storing the raw caustic. In two dilution tanks of the same capacity the raw caustic is diluted with soft water, necessary to prevent objectionable mineral deposits in order to assure a high quality product of greatest purity.

In the mixing or chlorinating tanks, chlorine is added to the caustic solution. There are six of these tanks, each holding 5,300 gallons.

Concentrated starch used in the production of liquid, bottled starch is received at the plant in bags. Perfume and color are added here. In fact, the Fullerton plant makes all the colors used with the different products it produces.

Hood maintains its own formula for its "Zero Household Cleaner." Various ingredients used in this cleaner are mixed in a big, wooden tank, the only one of its kind in the plant.

The three bottle lines at Fullerton are designed to handle a number of bottle sizes. For example, "33 Bleach" is packed in quart, half-gallon and gallon sizes. "E-Z Starch" is packed in pint, quart and half-gallon sizes. "Zero Cleaner" is packed in the quart size only.

Because of the different sizes of packages used and the necessity for cleaning lines thoroughly during the changeover from one product to another, only one product is bottled at a time, although lines may be operating simultaneously with different sized packages.

Bottles used on the three lines at Fullerton may be taken by conveyors directly from box cars on the nearby siding to the bottle lines. Bottles, which are packed necks down in the shipping cases, are dumped into the unscramblers, and the empty cases proceed by conveyor to the end of the bottle line where they are repacked with filled bottles of cleaner, starch or bleach.

From the unscrambler units empty bottles in single file move by conveyors to the labelers where the wrap-around style of labels used by Hood are automatically pasted to the bottles. Now the containers are ready for the fillers which are also entirely automatic in operation. Speed of the filling operation varies according to the number of heads on the machine and the size of the bottle being filled.

After leaving the fillers, bottles pass to the cappers. Here metal, screw-type closures are dropped on each bottle and then are automatically tightened to provide an adequate seal.

At the present time case packers are not used on any of the three lines, all case filling being done by hand.

After cases are filled, the flaps on the tops or open ends of the cases are first glued and then sealed on automatic case sealers.

Now the filled cases are ready for immediate shipment. They may continue by conveyor to the loading platform to be packed directly on to waiting trucks, or they may be stacked on pallets for temporary storage.

Equipment on the quart line includes a Standard Knapp labeler, a 30-head U. S. Bottler filler, Consolidated Machinery capper and Standard Knapp case sealer.

The half-gallon line has a Chisholm-Ryder New-Way labeler, a 36-head International filler, a Resina capper and a Standard Knapp case sealer.

Equipment on the gallon line includes a New-Way labeler, a 12-head International filler, a Resina capper and Standard Knapp case sealer.

If stacked on wooden pallets for storage, filled cases are "tied-in" to prevent the load on the pallet from toppling over when being moved. Loaded pallets are moved by means of a Yale & Towne fork truck which also stacks them in the storage room.

In use at the Fullerton plant are two types of pallets. One is the conventional wooden pallet which is moved with its load to the loading platform or directly into a waiting truck and then unloaded by hand. A newer type of pallet now being tried out at the plant has no cross pieces, which permits the fork truck to lift the load off the pallet and stack it into a truck in a unit load. This special type pallet provides a materials handling method of high efficiency.

Although changes and improvements in the plant structure at Fullerton are still being made, operations within the plant itself are, as Mr. Wetzel observes, well organized. With operations running smoothly in the newest of its plants, the Hood Chemical Co., now has plants operating in three principal areas of distribution—Lisbon in the Middle West, Jacksonville in the South and Fullerton on the Eastern Seaboard.

All photographs for this article were furnished by Owens-Illinois Glass Co., Toledo.

Ralph Wetzel, manager of the Fullerton plant of Hood Chemical Co., at his desk with samples of the firm's three principal products in front of him. These products are Zero Liquid Cleaner, 33 Bleach and E-Z Liquid Starch. Mr. Wetzel has been in charge of the Fullerton operation since the plant was opened in April. He was transferred from Hood's Lisbon, Ohio, plant.

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Sanitary Supplies for INDUSTRY

A survey conducted in Asheville, No. Carolina of the market for sanitary supplies based on the requirements of several industries there

By Florence W. Brewer

THE housekeeping problems of industry parallel those of the housewife, certainly on a bigger scale but just as certainly in a basically similar pattern. Industry, to be sure, has special individual cleaning and sanitation problems raised by the peculiarities of each business. However, a search in the stockrooms of factories and plants would show a range of products closely related to those kept in the housewife's cleaning closet.

Like the housewife, the maintenance departments in industry tend to look for the simplest product for a particular purpose, dual or triple purpose products, and of course, the most efficient product for the cost. Like the housewife, when industry finds a product which does a good job simply and efficiently at low cost, the manufacturer or distributor of a new material for the same job must prove really superior performance to bring about a change. Each industrial concern has its pet brands and methods. Its purchasing agent keeps his eyes open for new and better products but they have to be good to persuade him to switch his allegiance.

There should be nothing unexpected in these statements, but in discussing the problems involved in housekeeping for up to two thousand workers in one group of buildings, plus the machines and equipment they use, it may be well to relate the question to the simplest similar operation. After all, both industries and housewives are concerned with the same basic questions of eliminating or controlling dirt, germs, odors and insects. Each group has walls, furniture, floors, washrooms, windows, storage rooms and machines to keep in good condition.

The material for this appraisal of the housekeeping methods in industry was gathered in the course of interviews with the purchasing agents and/or maintenance supervisors of twelve representative industrial establishments. These included the following types of activity: paper manufacture, cotton bleaching and dyeing, milk processing, a farmer's cooperative, meat curing and freezer lockers, hand woolen weaving, blanket manufacture, a wholesale bakery, furniture manufacture, the regional office and warehouse of an electric power company, rayon manufacture, and a Coca-Cola bottling plant.

Few Specs. Noted

OF these twelve industries, it is interesting to note at the outset, that eight have no standard specifications which must be met by those supplying them with housekeeping materials. Of the other four, two must meet specifications set by government regulations (the dairy and meat and freezer locker concerns) and another, the power company, requisitions all its supplies from the main state warehouse where specifications are set up. The fourth, the bottling company, must meet specifications of three levels of government, local, state and federal, as well as the even stiffer requirements of the Coca-Cola Company itself. Aside from the power company, only two industries used their own facilities for testing sanitary products, except where they are actually used in the manufacture or processing of their product.

This should by no means imply that these industries are careless or unconcerned about the effectiveness of their housekeeping. It does mean that they tend to rely heavily on the advice and help of the distributor and manufacturer together with their own on-the-spot experience with various products. One local manufacturer of sanitary products told the writer that all the laboratory tests he could make did not equal in value actual testing on the job under each different set of circumstances. It was evident in the course of the interviews that the men responsible for the upkeep and sanitation of the industrial plants are thoroughly aware of the importance of high standards of cleanliness and sanitation.

All but three of the companies included in the study used the services of a professional outside exterminator in addition to their own insecticide methods given below.

There is such a wide variation in the materials and methods used and the particular problems involved in each industry that each company will be taken up individually with subheadings for ready reference. The figures following the product types indicate the approximate quantities used in an average year. Where one product is mentioned more than once in the company's outline, the consumption figure for total use is given after the first mention.

AMERICAN ENKA CORPORATION (approximately 2000 employees)

A. General cleaning
   1. Asphalt tile floors in offices —combination paste floor cleaner and wax (300 lbs.)
   2. Walls, furniture and inside windows — no-rinse liquid cleanser diluted with water.
   3. Outside windows—one of the special commercial liquid window cleaners.
   4. Concrete floors—a combina-

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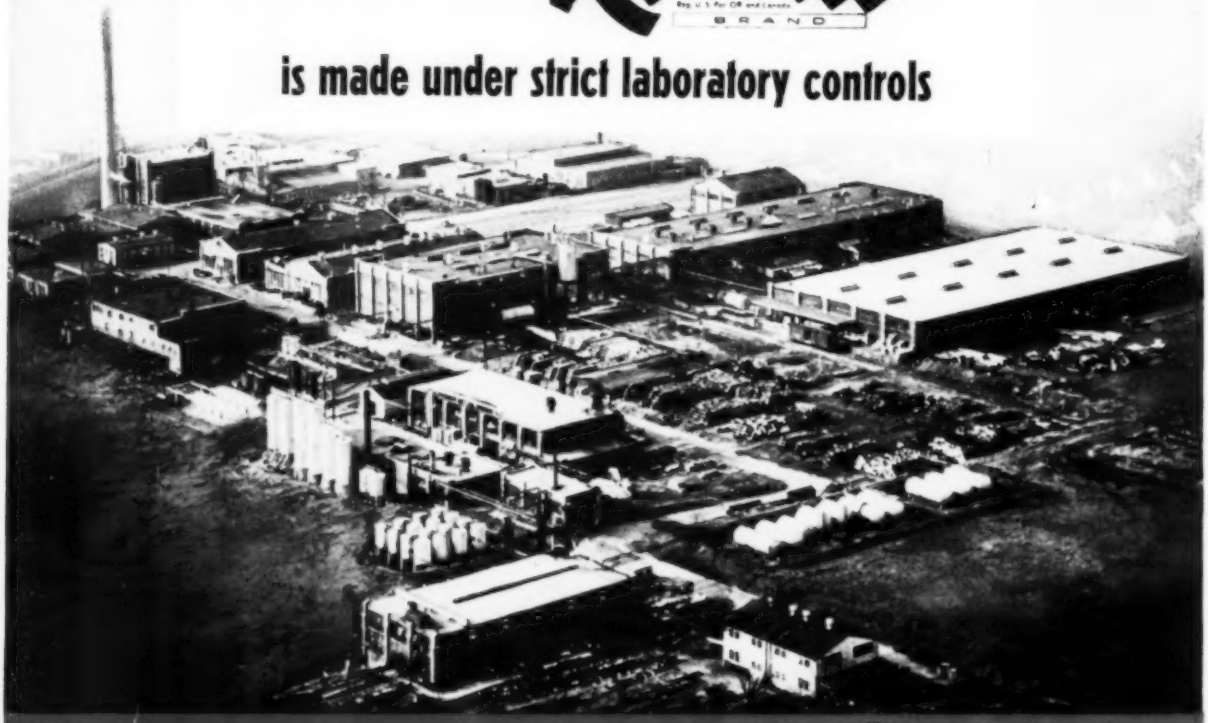

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tion of two heavy duty industrial chemical compounds in powder form, with mixed bases, including ammonium chloride and various soaps (600 lbs. of one and 900 lbs. of the other).

5. Garbage cans—a compound made especially for Enka, a synthetic detergent with high penetrating and wetting out properties plus germicidal action (200 lbs.) in conjunction with a general cleaning, disinfecting and mold preventing compounds (4 gals.).

B. Washrooms—an outside firm contracts for cleaning all washrooms. This organization sends its own service crew in once a month and its products are used daily by the Enka cleaning staff. Four different products are used for cleaning, disinfecting and deodorizing, one of them a foaming spray used to disinfect and deodorize toilets and urinals.

C. Polishes and waxes
1. Paste floor wax.
2. Cream furniture polish (also used for metals).

D. Insecticides
1. Screened throughout.
2. Doors and locker rooms sprayed regularly with DDT.

E. Hand soap
1. Lanolin base powdered soap (9000 lbs.).
2. Liquid soap made from own by-product.
3. Grease-cutting powdered soap with lanolin (12,600 lbs.).

F. Cafeteria
1. Pure liquid soap (same as liquid hand soap) for tables, etc.
2. Abrasive scrubbing powder for work tables.
3. Dishes—sodium carbonate, a by-product.
4. Glasses—powdered synthetic detergent.
5. Silver—silver washing powder supplied by manufacturer of silver-washing machines.
6. Semi-weekly steam cleaning, all halls and rooms scrubbed four times a day and kitchen thoroughly cleaned after each meal.
7. Germicidal lamps in refrigerators.
8. Overhead sprayer with nontoxic insecticide covers entire cafeteria in one and one-half minutes.

G. Special methods
1. Each department in plant takes care of its own cleaning, using much the same products as those listed above.
2. Machines—dismantled and cleaned in machine shop in a salt crystal (3600 lbs.) and acid bath, with a highly alkaline compound added to neutralize the acid. After heat and chemicals have dissolved grease, the parts are flushed with hot water and then dried by themselves.

H. Machines—hand sheeps wool wax applicator, scrubbers, buffer, industrial and hand vacuum cleaners

ASHEVILLE BAKING COMPANY (a large wholesale bakery employing an average of 75 workers).

A. General cleaning
1. Plant floors—special outside service system includes loosening dirt with steel wool in a scrubbing machine, vacuuming to remove this loose dirt, and sealing with a tung oil base floor seal (3 bls.) which fills all cracks and holes and gives a hard surface.
2. Tile floors—ammonia base powder (6 bls.) with water.
3. Windows—the same ammonia base powder for frosted glass windows and a mild abrasive powder (25 cans) for clear glass.
4. Machines—the same ammonia base powder.

B. Washrooms
1. Cleaning — ammonia base powder.
2. Disinfecting and deodorizing—an anti-mold powder used primarily in the proof box (500 lbs.).

C. Polishes and waxes—none.

D. Insecticides — roach powder made especially for the company; a pyrethrum liquid spray; and germicidal lamps in every part of the plant.

E. Hand soap—pine oil base liquid soap (40 gals.).

F. Special methods
1. Bread racks—steam cleaned.
2. Pans—chromium salt powder (325 lbs.) which removes grease and carbon without damaging tin coating.
3. Wrapping machines—carbon tetrachloride (25 gals.).
4. Trucks—outside with a soap powder truck shampoo (40 lbs.), inside with carbon tetrachloride, and bottoms with a grease dissolving detergent (trisodium phosphate base) (3 lbs.).

BEACON MANUFACTURING COMPANY (blanket manufacturing, over 2000 employees)

A. General cleaning
1. Concrete plant floors — strong scrubbing compound in powder form (1000 to 1500 lbs.).
2. Office and locker room asphalt tile floors—grease dissolving synthetic detergent (trisodium phosphate base) (1000 to 1500 lbs.).
3. Windows — mild abrasive scouring powder

B. Washrooms
1. Same detergent as A-2 above.
2. Strong chlorine base disinfectant (5 to 6 bls.).
3. Paradichlorobenzene (300 to 500 lbs.).

C. Polishes and waxes—none (use of floor wax discontinued because of accidents).

D. Insecticides—naphthalene flakes to protect wool from moths.

E. Hand soap—liquid soap (200 gals.).

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Now you can formulate area-type sprays that are fast-acting and highly effective against a wide range of food insects—yet *free from toxic hazards*, skin irritants, and objectionable odors. **Pyrenones* will give your area-type spray this unique combination of properties—a combination that means better, faster, more convenient pest control for your customers—and more sales for you.

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- Scorpions
- Hornets
- Gnats
- Mosquitoes
- Wasps
- Box elder bugs
- Clover mites
- Confused flour beetles
- Rust red beetles
- Granary weevils
- Rice weevils
- Saw-toothed grain beetles
- Spider beetles
- Angoumois grain beetles
- Mediterranean flour moths
- Meal worms
- Cigarette beetles
- Drugstore beetles
- Grain mites

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F. Special methods.
   1. Washing wool—pure white soap flakes (4000 to 5000 lbs.).

G. Machines—an abrasive scrubbing machine for plant floors.

BLEACHING AND DYEING COTTON CLOTH (Company). (Approximately 660 employees) (3 million yards of cloth processed per week).

A. General cleaning
   1. Concrete plant floors—a concentrated synthetic detergent cleaning fluid with deodorant properties (50 bls.) and hosing.
   2. Rubber tile floors in offices —mopped with a white soap powder (2500 lbs.) and water.
   3. Windows — naphtha base cleaning fluid (10,000 gals.).
   4. Machines—wiped with rag waste and blown out with vacuum blower; steel rollers washed with "Lava" soap.
   5. Motors—naphtha base cleaning fluid.

B. Washrooms
   1. The same concentrated compound as A-1. (Once a month a sanitary service sends a man who treats toilets, bowls, basins, drinking fountains, etc. with a special disinfectant solution which also removes rust stains. The regular cleaning crew also uses this product.
   2. A strong chlorine disinfectant (25 gals.).
   3. Liquid deodorant in drip container (5 gals.).

C. Polishes and waxes—liquid furniture polish (12 qts.).

D. Insecticides—in addition to exterminating service, large fans to keep insects from the cloth.

E. Hand soap—"Lava" soap (1500 bars) for mechanics, powdered soap (beet sugar product) for plant workers (2500 lbs.) and liquid soap for office workers (5 gals.).

F. Special methods (make own soap, pine oil (4000 gals.), red oil (50,000 lbs.) and caustic soda (15,000 lbs.).
   1. Water purification — water softener and rust preventative (15,000 lbs.) and chlorine. (Also keeps rust stains throughout plant at a minimum).
   2. Test for sanforizing—washing in pure white soap flakes.
   3. Cleaning cloth after dyeing —synthetic detergent (120,000 lbs.) which can be used in either an acid or alkaline bath.
   4. Removing spots from cloth—carbon tetrachloride (100 gals.).

G. Machines
   1. Industrial and hand vacuums.

CAROLINA POWER AND LIGHT COMPANY Western Division (approximately 400 employees in 11 transforming stations, warehouses, etc.).

A. General cleaning (Obviously use of water must be avoided).
   1. Machinery and equipment—steam cleaning with synthetic detergent (250 lbs.) and naphtha base cleaning fluid (300 to 400 gals.).
   2. Rubber tile floors in substation — undiluted liquid soap cleaning solution (240 gals.).
   3. Concrete office floors, woodwork and windows—solution of liquid scrubbing soap (41 gals.) and a quaternary ammonium compound in powder from (363 lbs.).
   4. Trucks—green soap.

B. Washrooms
   1. Quaternary ammonium powder in A-3 for cleaning and disinfecting.
   2. Deodorant blocks (30).

C. Polishes and waxes—paste furniture polish (purchased at retail as needed).

D. Insecticides—none necessary.

E. Hand soap—cake soap sold under distributor's trade name (684 cakes).

CHAMPION PAPER AND FIBRE COMPANY (approximately 2800 employees)

A. General cleaning
   1. Concrete plant floors—hosed and swept.
   2. Other floors—heavy duty liquid floor cleaning solution and wax cleaner.
   3. Windows — ammonia and water (A crew of three men does nothing but wash windows).

B. Washrooms—a pine oil disinfectant, by-product of manufacturing processes, for all purposes, cleaning, disinfecting and deodorizing, and a strong chlorine base disinfectant.

C. Polishes and waxes
   1. Non-skid liquid wax.
   2. Paste furniture polish.

D. Hand soap — powdered soap (4800 lbs.) in the plant and liquid soap in the offices.

E. Special methods
   1. Cleaning felts used in paper making — trisodium phosphate (24,000 lbs.).
   2. Instruments — carbon tetrachloride.

F. Machines—steam sprayer, waxer and polisher combination, and industrial vacuum cleaners.

COCA-COLA BOTTLING COMPANY (Approximately 70 employees. Turns out 270 bottles per minute. Last year turned out over 23 million bottles.)

A. General cleaning
   1. Floors (all brick, tile or cement)—pine base liquid cleaner and disinfectant (400 gals.).
   2. Windows—soap (same as A-1) and water outside, and a special commercial window cleaning fluid (10 gals.) inside.

B. Washrooms
   1. Same pine base cleaner as in A-1.
   2. Chlorine base disinfectant (25 gals.).
   3. Deodorant blocks in wall container (24).

C. Polishes and waxes—ammonia

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base polish (10 gals.) for aluminum and stainless steel.

D. Insecticides—non-toxic ammonia (10 gals.) used in a portable electric sprayer with time clock.

E. Hand soap—liquid soap with pine oil base (50 gals.) for general use and a strong powdered soap (200 lbs.) for mechanics.

F. Special methods
   1. Bottle washing machine—caustic soda (12,000 lbs.) in a 3% to 5% solution with a synthetic detergent for washing bottles at temperatures up to 160°.
   2. Sterilization of machines—bicarbonate soda (100 lbs.) and a concentrated bactericide (50 gals.).

G. Machines—electric floor scrubber and the insect sprayer.

FARMERS FEDERATION Offices and Wholesale Farm Supplies and Equipment (approximately 35 employees). (The fact that this building is situated beside the main switch yard of a railroad raises an almost insurmountable problem of sooty dirt).

A. General cleaning
   1. Concrete floors—strong soap powder (one case) and hot water.
   2. Woodwork and wood floors—a concentrated industrial cleaner and disinfectant (15 gals.).
   3. Windows — special commercial liquid window cleaner (12 qts.).
   4. Venetian blinds—mild soap.

B. Washrooms
   1. The same concentrated cleaner as in A-2.
   2. A mild abrasive powder for porcelain stains.
   3. A dual-purpose disinfectant and deodorant (one gal.).
   4. A chlorine base disinfectant solution (22 qts.).
   5. Special toilet bowl disinfectant and cleaner (12 qts.).

C. Polishes and waxes — popular brand furniture polish (23 qts.).

D. Insecticides — An insecticide spray used throughout store, warehouse and washrooms.

E. Hand soap—cake toilet soap (2 cases).

F. Machines — industrial vacuum cleaner.

FARMERS FEDERATION Skyline Cooperative Dairies (approximately 50 employees). (Because of the rigid necessity for absolute cleanliness, 40% of the production time of this company is devoted to cleaning).

A. General cleaning.
   1. Linoleum tile floors—a general all-purpose cleaner (see special methods) (4500 lbs.).
   2. Terrazzo tile and cement floors—a synthetic detergent powder with deodorant quality (900 to 1200 lbs.).
   3. Counters and containers in ice cream shop—(service is entirely in paper)—pure soap flakes (156 boxes).
   4. Windows — ammonia and water.
   5. Trucks — outside, carwashing compound and inside the same detergent powder as in A-2.

B. Washrooms
   1. The same detergent powder as in A-2 and a mild abrasive scouring powder for cleaning.
   2. The same powdered chlorine compound used every morning to disinfect all plant equipment for washroom disinfecting.
   3. Chlorinated lime for clearing drains.
   4. Deodorant blocks (60).

C. Polishes and waxes—liquid floor wax for tile floors.

D. Insecticides
   1. Residual fly spray (100 lbs.) on all walls, ceilings and screens.
   2. Twice a week the city Health Department sprays the outdoor area around the plant with a mixture of the above spray and DDT.

E. Hand soap—mild white toilet soap in cake form (3 cases).

F. Special methods.
   1. Wash vats for cleaning containers and parts—same all purpose cleaner as in A-1.
   2. Removing milk scum from flat surfaces—synthetic detergent (900 lbs.).
   3. Washing cans, pipes, vessels and fittings—a phosphoric acid powder (1800 lbs.).
   4. Chemical briquettes in can-washer, maintaining a constant ratio of acidity and alkalinity.
   5. Bottle washing — caustic soda.

G. Machines—rotary pipe brush.

FARMERS FEDERATION Freezer Lockers and Meat Curing (approximately 24 employees in 8 plants).

A. General cleaning (This is one organization which is so specialized it can hardly be said to have "general cleaning". Sanitary requirements are stringent and as there is almost no office space its procedures are very specialized.) A detergent powder (600 lbs.) and a cleaning, disinfecting and mold-preventing compound (5 gals.) are used for all-over cleaning.

B. Washrooms.
   1. One of the stronger soap powders.
   2. Chlorine type disinfectant and deodorant.

C. Polishes and waxes—none.

D. Insecticides.
   1. Germicidal lamps throughout all plants.
   2. Screens sprayed night and morning (before and after work) with DDT fly spray.

E. Hand soap—"Lava" cake soap (5 cases).

F. Special methods.
   1. The cleaning, disinfecting and mold-preventing compound in A is used in all work roms, curing rooms and refrigerators, as a strong cleansing agent and to prevent the formation of mold.
   2. Carbon air purifiers and dehydrators.

HAND-WOVEN WOOLENS (company) (approximately 35 to 100 em-

(*Turn to Page* 133)

Quality Means More than Price

Some chemical buyers make the mistake of considering price alone, forgetting other essentials such as quality, service, and product improvement.

Innis, Speiden offers you chemicals, gums and waxes at current market prices. In addition, Isco provides, at no extra cost, quality and service . . . These Isco extras actually mean lower costs to you through improved production.

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What's Ahead for

PYRETHRUM?

PYRETHRUM is again very much back in the insecticide supply picture. Burial services have been read over it time and again over the past ten years, but it simply refuses to stay covered up. First, it was supposed to be on the way out in the post-war days, when DDT was released for civilian use, and everyone, manufacturers and insecticide users alike, were clamoring for DDT insecticides. Next, it was consigned to oblivion again by many when it was announced that a synthetic, pyrethrin-like product, allethrin, had been developed. But pyrethrum just refuses to stay buried.

A very important factor in the resurgence of pyrethrum has been the come-back staged by space sprays for fly control. Over the past year the trend has been definitely away from the use of residuals, because of their declining effectiveness, returning to the use of pyrethrum-type space sprays.

With its natural advantages of fast knockdown of insects, and lack of toxicity to humans, its ability to do many jobs that other toxics cannot be trusted to do, pyrethrum still remains an important article in the insecticide supply picture—and a particularly important supplement to our inadequate supply of insecticide raw materials in the present market with demand far outbalancing supplies.

The chlorinated phenols proved upon use not only to introduce the problem of toxic residues, but have been ruled out also in some applications because of declining effectiveness, as in the control of houseflies. Use of allethrin has been limited also, since its toxicity to warm blooded animals has been under investigation. For a time it was not approved for use in aerosols, but Carbide and Carbon Chemicals Div. now advise that approval has just been granted.

Renewal of interest in pyrethrum then, is attributed to unsuitability, because of toxicity, of some other insecticides for domestic use, and in control of food infesting pests. Soil poisoning by repeated application of some of the chlorinated phenols may reopen still another field in which pyrethrum has been in part substituted since the war. Use in aerosols is another relatively recent application of pryethrum, and still other uses are under investigation.

The minimum requirements of the United States today for pyrethrum are estimated as about 6,000 tons per year. Expected supply for 1950 is only about 2/3 this figure, with no immediate alleviation of the shortage in sight. Allethrin may be substituted for pyrethrum in those applications where it has proved as effective as the natural product, but does not threaten to present serious competition at the moment.

The allyl cinerin is not to be considered as synthetic pyrethrum, but as an insecticide similar in chemical structure and effect to only one of the four active ingredients of the natural product. It is effective in the control of flies and mosquitoes, but has little effect on roaches. Its use with synergists is limited also, as compared with the natural product. The consensus is that allethrin is a promising insecticide, with a number of advantageous features. It offers a dependable supply, a product of controlled quality, is non-staining, and will not clog aerosols. But it is by no means a complete replacement for pyrethrum.

Import of Pyrethrum Flowers
(in thousands of pounds)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950*
Br. E. Af.	2,900	5,500	10,400	10,000	8,800	6,000	7,700	12,600	13,500	4,000	2,000	6,800	2,200
Belg. Congo								3,500	5,000	3,500	1,500	2,700	2,200
Japan	10,900	7,500	2,000										
Brazil	500	79	78					2,300	1,900	300			
Peru									20	50	14	17	
Yugoslavia											80	500	100
Others	280	480	95	1,000	700	800	2,900	———	80	250	6	3	610
Total	14,600	13,600	12,600	11,000	9,500	6,800	10,600	18,400	20,500	8,100	3,600	10,020	5,110

*To June.

Crop and Price of Pyrethrum Flowers

Br. E. Africa (crop long tons)	2,900	5,900	5,800	5,500	4,100	6,500	7,400	6,700	3,900	1,600	1,500	
Kenya Prices (cents/pound)	34-36 c.i.f.	28-22 c.i.f.	18.5 c.i.f.	← no sales, gov. control →				29 f.o.b.	27.5 f.o.b.	.23 f.o.b.	27-39 f.o.b.	38 f.o.b.

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A multi-ton batch of Allethrin was produced last March, and pending further demand, this quantity, and more, can again be made at any time. But it is not as yet being made on a continuing commercial basis. Manufacture is a very complicated process, involving twelve chemical steps and a mass transfer of a million pounds of chemical solids and liquids for each 5,000 pound lot of allethrin. The present market price is $45 to $55 per pound, as compared with the current pyrethrin price of $47 to $57 per pound (based on 100 per cent extract). Commercial pyrethrum normally sells as a 20 per cent extract of pyrethrins for $9.50 to $11.50 per gallon. An increase in production of allethrin may allow manufacturing savings, thus permitting lower prices.

IN the thirties, American imports of pyrethrum were mostly of Japanese origin, averaging 13 million pounds per year, with shipments of smaller quantities from Brazil and some other South American countries. In 1939, the British Kenya Colony started to replace Japan as the chief supplier, primarily because the flowers shipped were of a higher quality. Kenya flowers were guaranteed to test 1.3 per cent pyrethrins, while the Japanese flowers usually tested around .9 per cent or even lower. Furthermore, in moisture control, Kenya flowers ran only one-half the normal Japanese flower content of 15 per cent.

Through the war years, and for a couple of years after the war, pyrethrum production in British East Africa and the Belgian Congo was kept at peak levels, through government guarantees. Imports into the U. S. averaged nine million pounds per year during the war, rising to 19 million pounds in 1945 and 1946. The cancellation of government contracts after the war, and the consequent cessation of government guarantees, resulted in a surplus of pyrethrum. The pyrethrum market was depressed further by two poor years for the sale of household insecticides coupled with severe competition from newly developed and widely publicized chemical insecticides. Imports dropped to a low of three and one-half million pounds in 1948, and Kenya farmers cut pyrethrum acreages to grow more profitable crops.

The trend changed in late 1947, as insecticide formulators recognized the inadequacy of some of the new compounds, and market conditions assumed a more normal status. However, although demand for pyrethrum increased, there was necessarily a considerable lag in bringing supply into adjustment. Pyrethrum is a 3 to 4 year crop, and there is a long delay between planting new acreage and the time when the added output reaches the market. Thus, the Kenya crop in 1948 was only 1600 long tons, as against the all time high of 7400 tons in 1945. In 1949 the crop was but 1500 tons, with an expected production of 2000 tons in 1950, and about 2500 tons in 1951.

However, an added factor in the pyrethrum picture, is the production of flowers of a higher quality in the past year, which means a higher concentration of pyrethrins in a smaller crop. Agronomic research and experimental work by the pyrethrum producer organizations in Africa have resulted in the breeding of a strain of flowers with a higher pyrethrin content. Flowers imported in 1949 averaged 1.35 per cent, imports in January to June of 1950 averaged 1.40 per cent, and the 1951 shipments are expected to reach 1.50 per cent. Still another factor in the pyrethrin content picture, is the improved method of shipping and handling flowers, which has reduced losses of pyrethrins in transit by more than two-thirds.

Total imports of pyrethrum into the United States during the first half of 1950 exceeded six million pounds, with an expected total of 8 million pounds by the end of the year. As already mentioned, though, this will not meet full demand. British East Africa, and the Belgian Congo have supplied more than 90 per cent of all pyrethrum shipments for the past ten years, with the balance coming from Yugoslavia, Brazil, etc. In 1945, imports from Brazil were resumed in quantity, totalling 2,300,000 pounds; in 1946, this figure dropped to 1,900,000 pounds, and to 300,000 pounds in 1947. Since then, there have been no shipments from that country. Peru supplied 20,000 pounds in 1946; 50,000 pounds in 1947; 14,000 pounds in 1948 and 17,000 pounds in 1949. Small amounts are expected from this quarter in 1950 also. Yugoslavia, important supplier of pyrethrum in the '20's, has also resumed shipment of pyrethrum, exporting 80,000 pounds to the United States in 1948; 500,000 pounds in 1949; and by June 1950, has already shipped 100,000 pounds of flowers.

AN interesting feature of the supply picture is the return of Japanese production. Although the greater part of the crop is to be retained for domestic consumption in Japan, still a few hundred tons will probably be received in the United States in the next few months. Japan has produced about 1200 long tons of flowers in 1948, about 2000 tons in 1949, and her crop for 1950 will total about 2000 tons with a somewhat higher production in 1951. Of course the Japanese product is not of a quality (averaging .9 per cent pyrethrins) as high as the Kenya flowers, but in view of the shortage, U. S. buyers may be interested in this source.

To review the price picture, pyrethrum flowers sold for 35 cents per pound in 1939, dropping to 28, then 22 cents in 1940, and again to 18½ cents in 1941 through 1942 (prices to this point quoted c.i.f.). Following the release of government controls in 1945, pyrethrum flowers sold for 29 cents f.o.b. in 1946, dropping to 23 cents per pound by 1948, then rising sharply by the end of 1949 to 39 cents per pound. The current price is about 38 cents, with an expected drop to 36½ cents by June 1951, and 32 cents per pound by the end of 1951. The pyrethrum extract (20 per cent pyrethrins) currently sells for $9.40 to $11.70 per gallon (allethrin of same concentration sells for $9 to $11.00), so that on the basis of the expected drop in cost of flowers, the extract may be expected to sell for $8.00 to $9.80 per gallon by the end of 1951.

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It KILLS FLIES and other insects QUICKER!

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THE FLY SEASON IS ON! Order from your jobber now or write to

TETCO CO.

458 So. Spring Street, Los Angeles, California or Hobart, Indiana

Toilet Soaps

(*From Page* 48)

cooling, the large slab is first cut into bars and stacked in open piles, after which it is chipped by means of a rotary cutter or other chipping equipment, and further dried by the customary drying chamber method outlined above.

Mixing Stage Described

TOILET soap, as the public knows it, first begins to assume its separate and distinct character at the mixing or amalgamating stage. The storage bin or hopper is preferably arranged above the amalgamator and suitably equipped with a weighing device, so that weighed quantities of chips can be fed directly into the amalgamator. The latter is usually a horizontal trough mixer equipped with a stout shaft and heavy duty blades: in a typical design a worm and quadrant gear is provided for tipping the container after each batch has been mixed. The container itself is preferably lined with stainless steel or other non-corrosive metal and may also be fitted with a safety grille. Perfume, color, whitening materials such as zinc oxide, and other special ingredients, are usually poured by hand into the amalgamator, although some firms are beginning to adapt a semi-automatic spraying device (as used in face powder production) for adding the perfume.

Small firms, including native manufacturers "in far away places", sometimes do without the amalgamator, by mixing the batch in a box or truck by means of a shovel. Obviously it is impossible to insure uniform mixing by such primitive methods.

When the mixture of chips and perfume, etc. is considered to be sufficiently homogeneous, the amalgamator is tipped electrically or by hand, with the result that its contents are shot either into a storage truck or preferably directly into the mill hopper, ready for the next step in the process.

Mills are of various types and patterns, but they all have the common feature of providing a means for compressing and shearing the soap, by causing it to pass through a system of rolls or rollers rotating at different speeds. The speeds and ratios of the gears are specially designed to give optimum performance in respect of this grinding and kneading action. For many years granite roll mills were widely used in the U.K., but nowadays they have been almost entirely superseded by mills with chilled iron or chilled steel rolls, 3-roll types being standard in many factories, although there is a certain tendency to employ 5-roll mills of the type used also for producing polished soap flakes.

A typical 5-roll toilet mill, as used for heavy and continuous duty in large output plants, consists of a sturdy, semi-streamlined frame containing five water-cooled rolls of hardened and ground chilled steel, the shells of which are chamfered at the ends to avoid overheating. Careful attention is paid by the engineers who design these mills to insure ease of lubrication and cleaning, minimum vibration, and ease of setting and alignment. Front and back scrapers and a two-compartment feed hopper are fitted, in order to provide for either single or repeated milling of the soap base. The top roll is equipped with a serrated or plain scraper knife and a series of cutters set at different tangents to the roll, this device stripping the milled soap off into ribbons. Generally speaking, the majority of 3-roll mills are also designed on lines similar to the foregoing.

The rolls of the older granite-roll mills cannot be set as close together as metal ones without the danger of overheating arising, together with noticeable loss of volatile matter, including perfume ingredients. The soap itself may also suffer by becoming too dry and leathery for easy processing in the plodder. Owners of granite roll mills can, however, utilize them by arranging them in tandem with a more modern mill, the granite mill doing the rough work at a reasonable clearance and the more closely set steel rolls conferring the desired degree of fineness.

Three millings were essential with the older granite mills, this being the minimum required to produce a suficiently fine ribbon. With a modern soap mill, two millings may sometimes prove adequate. Where two or three mills are used, no double hoppers are fitted, the soap being fed into the first mill and passed automatically to the second, and so on, until the finished ribbons are delivered to temporary storage containers or direct to the plodder. If only one mill is operated, the lower hopper is charged with soap and, when it has all passed through, the drawboard is pulled out and the batch allowed to fall back again between the first pair of rolls.

New Milling Units

A small toilet soap unit may consist simply of a mixer or amalgamator, one mill and one plodder. Larger units may consist, in addition to the amalgamator, of two or three mills, an optional pre-plodder and a plodder; or of one or two amalgamators, a pre-plodder and two plodders—omitting mills entirely. In modern practice there are two separate tendencies discernible: the first is to use improved types of mill for toilet soap making, while the second is to discard the milling process and replace it by a "pre-plodding" procedure. Pre-plodders or refiners are essentially plodding machines devoid of the usual compression nozzle (which is replaced by a multi-perforated plate) and working at somewhat reduced pressures. The soap issues from the pre-plodder as a series of "worms", like macaroni, which may optionally be cut up into pellets of different lengths. The worms or pellets are then fed to the plodder.

Pre-plodding as a substitute for milling is probably most suitable for the processing of a comparatively soft type of toilet soap, such as those that contain a fair proportion of phenol, cresol and rosin. It is significant that British factories using this process still adhere to milling for the main run of their toilet soaps, which are of a substantially harder consistency than the pre-plodded product. Claims made for pre-plodding as against milling refer to savings in power, labor, soap scrap and perfume, and to the prevention of excessive noise and overheating. The

COMBAT THE PRESENT HIGH COST AND LIMITED SUPPLY OF OIL CEDAR-LEAF BY ADOPTING

IMITATION CEDAR COMPOUND "ORBIS"

HARDLY distinguishable in odor and strength from the natural oil, it will cut your perfume or deodorizing cost by more than half.

SAMPLE AND PRICE AVAILABLE ON REQUEST

ORBIS PRODUCTS CORPORATION
215 PEARL STREET, NEW YORK
FACTORY AND LABORATORY: NEWARK, N. J.

COSMETIC RAW MATERIAL
WATER SOLUBLE GUMS
FOOD COLORS

PERFUME BASES
ESSENTIAL OILS
FRUIT FLAVORS

QUINCE SEED
OLEO RESINS
STEARIC ACID

WAXES
THYMOL
AROMATICS

CHICAGO PHILADELPHIA MEXICO, D.F. BOSTON LOS ANGELES MEMPHIS, TENN.

significant factor, however, is probably the type of base to be processed.

From the mill or the preplodder to the plodder itself is the next step in the process. The Archimedean screw principle of the plodder, making it resemble a large version of the domestic mincing or sausage-making machine, remains basically unchanged. Soap machinery designers continue to devote much attention, however, to plodder design, with the result that the size and shape of the screw (or compression worm), as well as of the compression chamber, graining plates, nozzles and dies, are subject to variation according to make. While formerly the cast iron interior gave endless trouble with rust formation, the metals nowadays used in plodder construction—nickel and aluminum alloys, stainless steel, phosphor bronze, etc.—are employed specially to avoid all kinds of metal and metal salt contamination.

The function of the plodder, to compress the soap ribbons into a solid, homogeneous bar, basically is simple, but in order to obtain the most satisfactory results it is essential to pay close attention to all details of the procedure. The problem of the stresses set up by plodder compression is a rather difficult one. The soap, as it passes through the compression plate, is formed into separate rods which are subsequently forced together by pressure and then emerge as a composite bar through the nozzle. The bar or billet so formed invariably seems inclined, to a greater or lesser extent, to split or crack along these lines of bonding or cleavage. Even with other methods of compression and extrusion, the same type of problem would of course arise, and even with each separate rod the core travels through the plate at a different speed from the outer portion. It is probably true to say that all the leading soap machinery designers continue to examine possible means of improving the uniform structure of the plodded soap bar.

Meanwhile it is up to the soap manufacturer to use his existing plodders as effectively as he can and, when the opportunity arises, to purchase only the most efficient of modern plodders as replacements. The plodder is perhaps the most vitally important unit in toilet soap production.

(To be concluded)

Sanitary Supplies...

(From Page 125)

ployees depending on season).

A. General cleaning.
   1. Floors—naphtha base cleaning fluid (100 gals.).
   2. Windows—pure soap and water.
   3. Glassware (in gift shop)—ammonia (one gal.) and water.

B. Washrooms
   1. Pine oil base disinfectant for cleaning, disinfecting and deodorizing (10 gals.).

C. Polishes and waxes.
   1. Silver in gift shop—cream silver polish (12 jars).

D. Insecticides — paradichlorobenzene moth crystals for protecting both raw wool in bags and finished cloth (300 to 700 lbs. up).

E. Hand soap—pure white cake soap (2 cases).

F. Special methods.
   1. Wool washing — popular brand of pure white soap flakes (1000 to 1200 lbs.).

MORGAN FURNITURE COMPANY (approximately 430 employees). (Since this company makes all wood unfinished furniture, an extremely high degree of sanitation is not required in the manufacturing process).

A. General cleaning.
   1. Plant floors, walls, machines, etc.—swept and air hosed.
   2. Office floors and woodwork —strong soap powder (300 lbs.)
   3. Cafeteria floors—washing as above plus a chlorine derivative disinfectant (48 qts.) and a pine oil dust powder 300 lbs.).
   4. Cafeteria dishes — synthetic detergent powder (300 lbs.).

B. Washrooms.
   1. All-purpose cleanser and disinfectant (5 gals.)
   2. Pine oil base disinfectant and deodorant (5 gals.).
   3. Mild abrasive scrubbing powder (2 cases).

C. Polishes and waxes—none.

D. Insecticides.
   1. Insect spray (10 gals.) in offices, washrooms, cafeteria and storerooms.

E. Hand soap—cake toilet soap (6 cases).

It is easy to see from the foregoing the prevalence of the tendency to find one product to do the work of two or three and of the desire for uncomplicated procedures. Although so many of the purchasing agents and superintendents wished brand names to be omitted, it may be safely stated that a great proportion of the products they use in their "big-scale housekeeping" are the same popular brands which the housewife buys in small quantities in the neighborhood store. This is especially true of the cake soap, soap powder, synthetic detergent powders, scouring powders, polishes and waxes, and window cleaning agents.

Opinion of Distributors

THE opinions expressed by the men who buy sanitary supplies concerning the mnaufacturers and distributors of these materials are interesting and varied. Almost without exception they expressed admiration for the reliability, helpfulness and service of the manufacturers. However, their opinion of distributors in general is by no means as high. Four of the purchasing agents felt a little bitter about the almost endless line of chemical and janitor supply salesmen making demands on their time. They said, "There are just too many of them and they're too persistent". Three felt that the salesmen were either not well-informed or inclined to rattle off technical information without the ability to translate it into lay terms. Distributors need not be too discouraged, for five of the purchasing agents gave high praise to the distributors, especially for their help in solving special problems, their service and follow-up.

A NEW LINE OF

Self Polishing

FLOOR WAXES

TO SUIT YOUR NEEDS

SAFETY → • Non-Slip (U.L. Approved)

ECONOMY → • Highly Water Repellent
• Controlled Solid Content
• Extremely Durable
• Good Removability

BEAUTY → • High Gloss

Write for prices and information.

ALSO: Furniture Polish — Auto Polish — Glass Polish (Wax Type) — Neutral Liquid Soap

•

Using latest manufacturing techniques.

Incorporating newest scientific developments.

•

Products of Merit — MH — and Honor

M & H LABORATORIES

2705 ARCHER AVENUE

CHICAGO 8 • ILLINOIS

PROTEXAL

"PROTECTS THE PUBLIC HEALTH"

ONE-OPERATION DETERGENT-SANITIZER

FOR HAND DISHWASHING

Distributors WANTED FOR PROTEXAL

- **Abundant suds in very hard water**
- **Free rinsing — no towelling required**
- **Very mild — easy on the hands**

Join The Hundreds of Satisfied Users

National Milling & Chemical Company

Industrial Soap Products Since 1896

4603 NIXON STREET • PHILADELPHIA 27, PA.

Soap Advertising

(*From Page 46*)

in serving the public—"service through products which uniformly deliver the promised results in return for the price paid."

Once in a while, criticism of an advertisement released by a national manufacturer comes to the local Bureau, naturally concerned. Quite understandably, it is asked, "Does this sort of criticism indicate a lowered confidence in advertising generally?" Despite the practices of a very few companies which may properly be deplored, I really do not think public criticism of national advertising is widespread to any alarming degree. This opinion is not an offhand one: It is based upon study of consumers' attitudes toward—putting it mildly—competitive advertising in a highly competitive field—the sale of soap. Here once more I should like you to examine with me the results of our experience, which is drawn from interviews and from correspondence.

Procter & Gamble's reputation with the public has been the subject for some years of continuous country-wide study by independent research people. The questionnaires used in this work have encouraged the typical citizens interviewed to mention any grievances they may have against it. Although, as you know, we advertise a number of brands nationally, the total number of people expressing criticism of our advertising in any of these periodic reports never has been over ¼ of 1% of all the people interviewed.

We consider the general problem of criticisms and complaints a most important one for the obvious reason that we are selling something to practically every home in the country. Housewives, who are the usual buyers of our products, seem to be very frank in expressing their opinions to us about our brands, our advertising and our merchandising methods. We are glad that this is so, because it helps to keep our business on the beam and fully in the public interest.

Naturally, then, you will find us paying a great deal of attention to consumer correspondence as a mirror of users' attitudes. In fact, it is considered so very important by our company that the Division of Public Relations, which handles all of it, submits a monthly report to top management by brands and subjects, tabulating all letters received by the company during the previous month. These thousands of letters give us a pretty clear picture of consumer thinking about our business, including our advertising.

Users' Views of Advertising

WHEN one reviews a pile of such letters, one is impressed repeatedly with this fact: Housewives believe that advertising claims should be acceptable at their face value, and are so accustomed to finding that they are, that any apparent exception to this rule is a cause for their complaint and even indignation. This reaction is exemplified by letters we get once in a while sharply criticizing us for, say, non-delivery of a premium that has gone astray in the mails. In such a case, often the writer clearly is "just plain mad" because her buying advisor, advertising, on whom she tells us she expected to depend, has apparently been misused.

Based on a careful study of this consumer correspondence, therefore, I must say that I do not believe that consumers in general have less belief in the validity of advertising claims today than, say, before the war. In fact, I believe they are inclined to place more credence in advertising claims today, for several good reasons: They are learning to buy more and more goods each year from advertising; and they learned during the war how very dependent the country was on the power of advertising in rallying the public. Most of all, they have sensed the practical results of the voluntary correction initiated by Better Business Bureaus and many trade associations, plus the extended activities of the Federal Trade Commission in its radio and periodical and its trade practice conference work. I believe, therefore, that consumers generally recognize that advertising as a whole has become progressively more dependable as a source of trustworthy buying information.

Publishers of magazines will tell you that their studies of reading habits of consumers indicate that the advertising sections of their magazines continue to be extremely important from the viewpoint of interest to readers. Publishers of newspapers will tell you of the continuing importance of the shopping columns of the grocery and drug chains and large department stores, in assuring feminine readership of the daily press.

As I see it, so long as we advertisers stick to these objectives: first, finding out what the consumer wants; second, giving it to her in products of sound value and dependability; and third, being sure that we give her, in good taste, advertised reasons for buying that are provable and supportable technologically and legally—if we stick to these requirements we need not worry about tearing down the standing of the public's appreciation of advertising because the advertising will be rendering consumers a real service that they will appreciate.

In saying this I am not, of course, taking the position that all advertisers of consumer goods are sticking meticulously to these requirements. I do not want to pose as a walking whitewash brush for all business practices; but I do believe that the great bulk of national advertising (and so far as I can see, of national-local advertising) is based upon provable facts and is serving the public well.

New Pest Vaporizing Device

The development of a thermostatically controlled mechanism which vaporizes a specially prepared insecticidal formula was announced recently by Remington Products Corp., 410 N. Broad St., Elizabeth, N. J. The mechanism is designed for the control of household pests and is affixed to the wall about three feet below the ceiling. It plugs into any standard AC or DC outlet. The insecticide used in the device contains no acetone or kerosene and is odorless, stainless, and does not affect humans, animals or foodstuffs, it is claimed.

Here's the SIMPLEST WAY to make TOP QUALITY DISINFECTANTS

You can easily obtain disinfectants of high bactericidal efficiency—for use in restaurants, hotels, hospitals, commercial buildings, industrial plants and homes—by using Nopco* 1444 and Albasol* AR, Nopco's outstanding emulsifiers for pine oil.

NO { *heat*, *rosin*, *caustic soda*, *caustic potash*, *—or other chemicals*

SIMPLE HAND MIXING IS ALL THAT IS NEEDED

You have only to add pine oil to either Nopco 1444 or Albasol AR, stir (at room temperature) until a uniform mixture is obtained, and then add water. Special technical knowledge or equipment is absolutely unnecessary.

And the finished disinfectants, you'll find, are not only effective germ killers but—since they are brilliantly clear—are attention-getters, with exceptional sales appeal.

Nopco 1444—is a clear, light amber liquid base, designed to carry 4 parts of pine oil. Soluble pine oils prepared with this base are emulsifiable in either warm or cold water in all proportions. Phenol coefficients of 2, 3, 4, 5, and 5-plus are easily obtained.

Albasol AR—is a special highly concentrated emulsifier, somewhat darker than Nopco 1444. It possesses unusual carrying power for pine oil and blends readily to produce brilliantly clear disinfectants. Formulas giving phenol coefficients of 2, 3, 4 and 5 are easily compounded.

Learn all about these remarkable bases—that make it possible for you to produce top quality disinfectants economically, in the simplest manner ever devised! Fill in the coupon and mail it to us today.

NOPCO CHEMICAL COMPANY
Harrison, New Jersey

Gentlemen:

Please send me full information about Nopco 1444 and Albasol AR bases for Pine Oil Disinfectants.

Name.....
Firm.....
Address.....
City.....Zone.....State.....

*Reg. U. S. Pat. Off.

NOPCO — EVOLVED THRU RESEARCH

NOPCO CHEMICAL COMPANY
Harrison . . . . . New Jersey

Federal FLOOR FINISHES

You Can't Sand Floors Forever

WHERE SANDING IS IMPRACTICAL...

USE FEDERAL STRIP-FAST
QUICK ACTING SEALER AND FINISH STRIPPER

NON-INFLAMMABLE

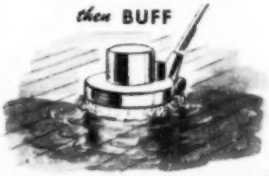
- No Fire Hazard
- No Neutralizing
- Quick Acting
- Economical

Will not clog steel wool pad—buffs clean and dry. NEEDS NO AFTER-RINSE OR NEUTRALIZING. Will not discolor wood. Send for FREE testing sample.

JUST APPLY...

Use a lamb's wool applicator or brush—no caustic or acids to burn the skin. Blisters sealers and finishes in just a few minutes.

then BUFF



Federal VARNISH DIV.
ASHLAND AVE. AT 29th ST.
CHICAGO 8, ILLINOIS

DDT As Polio Spray

Houses in Cranwell, England, where deaths from infantile paralysis have occurred, recently were treated with a mixture of DDT and pyrethrum to kill all insects which possibly may be carriers of the virus. A British-made machine, developed from an American war time fogging apparatus, was used for the experiment. Where this treatment has been used it is claimed that incidence of the disease has declined sharply. It is reported this is the first time this method has been used for this purpose in Great Britain.

Thompson-Hayward Names

Thompson-Hayward Chemical Co., Kansas City, recently appointed Peter D. Stogis as new general manager of the Chicago office.

Dairy Sanitation

The disinfecting power of several compounds, tested under standard dairy conditions, is not affected by the hardness of water; it is affected slightly by the temperature of the solution; and is reduced by the presence of skim milk. Compounds tested were: ethylhexadecyl dimethyl ammonium bromide, a mixture of dimethyl alkylbenzyl ammonium chlorides. (B. T.C.), and 1-hexadecyl pyridinium chloride (Ceepryn). The lowest killing concentration was between 1:2000 and 1:50,000. B.T.C. had the lowest efficiency of the compounds tested. *Proc. 12th Intern. Dairy Congr.* 3, 338-49 (1949).

Niagara Alkali

(*From Page* 49)

Meanwhile, however, Roberts Chemical Co. despite all its promise, could not operate profitably, and Niagara Alkali Co. was formed to take over the property.

Perhaps the most important step of the new management was to double capacity in the form of an original battery of 50 of the new German Billiter-Siemens cells. Output of caustic potash jumped from 200 to 400 tons annually. This cell was operated for about 20 years.

Events leading up to the formation of Niagara Alkali foreshadowed World War I. Controlling the raw material, muriate of potash, and also producing caustic potash in immensely greater volume, German industrialists threatened to squeeze Niagara Alkali from both sides. Muriate prices advanced from $21 per ton in late 1910 to $39.65 in August, 1921. Simultaneous reductions were made in the selling price of German-made caustic potash from $107 down to $65 per ton late in that year.

Niagara met this threat by expanding production and by efficiency and pioneering into new products. The flaking of alkalies was one of these. Caustic potash previously had been sold only in fused, broken and liquid forms.

Experiments with flaking alkali were initiated in 1912 and shortly led to production of both caustic soda and caustic potash in this form. This innovation was particularly valuable to the soap and textile markets principally because of the ease of its handling.

Closely allied with Niagara Alkali, since its formation, Electro Bleaching Gas Co., which had prospered through the years, purchased Niagara Alkali on October 19, 1915, largely due to the efforts of Mr. Kingsley. The two companies continued to operate separately, however, until their formal merger on July 1, 1941.

The story of America's chemical expansion during World War I is familiar to most people in the chemical industry. The use of chlorine was widely expanded. Monochlorobenzene came into great demand for dyestuffs. Paradichlorobenzene, a by-product, later was used for repelling and killing insects, particularly moths and their larvae, though a market had to be built. Only one new product was introduced into the company's line in this period. This was refined potassium carbonate, likewise an American first, for it had not been produced here previously. All other improvements were in the purity or some physical form of the original caustic potash and caustic soda. But the operations of the company were important to United States economy and to the chemical industry. With its efficient management by Mr. Kingsley the company continued to prosper along with other leaders in the industry.

Another pioneering venture remains to be noted, for in 1928 hydrogen from Niagara's electrolytic cells was first provided for the production of synthetic ammonia.

The importance of the chlorine compounds is emphasized in the fact that among them are two types of synthetic rubber, Neoprene and Thiokol; a fire extinguisher, carbon tetrachloride; essential refrigerants, methyl and ethyl chlorides; several plastics, vinyl and vinylidene chlorides, Pliofilm, etc.; non-inflammable dry cleaning solvents, tetrachlorethylene, as well as other valuable compounds in which chlorine plays a prominent role, such as ethylene glycol, amyl alcohol, etc.

Overshadowing all, however, is the production of chlorine to purify drinking water of water borne bacteria. Seventy-five per cent of all drinking water is now treated with chlorine at a cost of around one cent per person per year.

Most recent product of the company is trichlorethylene, widely used in metal degreasing and cleaning, and shipped in drums and tank cars.

Niagara Alkali at the present time is under the direction of J. Clarke Cassidy, president. Mr. Cassidy followed in the footsteps of Mr. Kingsley, under whom he worked for many years, having come up through the production department.

Other officers include Stephen J. White, vice president and treasurer; S. Willard Jacobs, vice president, and Willard H. Weed, manager of sales, all of whom have been associated with the growth of the company for many years.

Niagara Alkali has pioneered in many directions within its specialization and its products have contributed heavily to the health of America and to widespread improvements in the products of American industry.

At the present time, the company is gearing itself to the future, whether the future be peace or war.

"HITARAC"
FOR DISINFECTANTS

Disinfectant Manufacturers:

If you use Cresylic Acid—you will be interested in the advantages of "HITARAC."

Advantages:

- Costs less than A.D.F. Cresylic Acid
- American Duty Free
- Bactericidal action twice as great as A.D.F. Cresylic Acid by F.D.A. test
- Less toxic to the skin
- White emulsion quality

WRITE TODAY FOR DETAILS, SAMPLES & PRICES

TAR RESIDUALS Inc.
420 LEXINGTON AVENUE, NEW YORK 17 • LExington 2-9414
SOLE U. S. SALES AGENT FOR COALITE & CHEMICAL PRODUCTS LTD., ENGLAND

Specialists . . . **FOR OVER 25 YEARS**

In the manufacture of

No Rubbing Wax	Liquid Soaps
Liquid Wax (Solvent Type)	Scrub Soaps
Paste Wax	Neutral Cleaner
Rug and Upholstery Shampoos	Pre-Wax Cleaner
Disinfectants and Deodorants	Gym Finish
Slip Resistant Liquid Wax	Floor Seal

and other specialties

WATER EMULSION PASTE WAX

NUTRA SHEEN "The Neutral Cleaner"

Our No Rubbing Liquid Wax is Approved by
THE UNDERWRITERS LABORATORIES AND BY THE RUBBER FLOORING MANUFACTURER'S ASSOCIATION

BUCKINGHAM WAX COMPANY
Mfrs. of Floor Waxes—Soaps—Cleaners—Polishes
LONG ISLAND CITY (1), N. Y.
WAREHOUSE: DALLAS, TEXAS

Fungicides

(*From Page* 113)

by the Ultra Chemical Works, of Paterson, N. J. This product, with a wide range of usefulness, is made with phenyl hydroxy benzene, dimethyl carbinol (isopropyl alcohol) and soap in a vehicle consisting of mineral oil and water.

Quite a number of materials are available for more specialized uses, such as the treatment of fabrics. Cotton, by far the most commonly used textile material, is readily attacked by the all-too-abundant cellulose-decomposing fungi. Other natural fibers, like wool and silk, are highly resistant to deterioration by fungi and synthetics, like nylon and acetate rayons, do not support mold growth. Nonetheless, surface-growing, unsightly molds will appear if the fabrics provide nutrients in the form of grease, dirt or perspiration.

Standards for textile-protecting compounds have been proposed from time to time. According to Horsey's survey, (10) people in the textile industry believe that a good mildew-proofing agent should be odorless, nontoxic, weather-resistant, heat- and light-resistant, noncorrosive, water-resistant and flexible.

While a number of agents approach these standards, many of them are of limited value to the householder because their application requires special equipment or procedures. However, quite effective and simple measures have been worked out by Government agencies and commercial groups. Thus, workers (2) in the U. S. Department of Agriculture have found that "excellent protection against mildew growth" can be obtained by two-bath processes which lead to the formation of insoluble cadmium or copper soaps in the fabrics. Simplified mildew-proofing procedures based on this principle are provided in a government publication (40) on antimildew treatments by home methods.

Perhaps more specific, but employing the same principle, is the process outlined by Hardy. (41) This requires that the cloth be dipped for 10 minutes in a bath of 0.5 per cent soap solution and then in a second bath of 1.0 per cent cadmium chloride or copper sulfate solution for 30 minutes. The cadmium soap thus formed is colorless, while the copper soap is blue.

Illustrative of the work done by industrial organizations are the methods employing "Compound G-4" (or "Preventol GD"). During the war, the producers of this material had developed effective methods for treating Army and Navy equipment and a wide range of consumer products. (4) Feeling that these solutions, which contained inflammable solvents, might not be generally acceptable for household use, they (33) formulated the following aqueous solution which could be emulsified with water:

	parts
Compound G-4	10.0
Isopropyl alcohol	10.0
Wetting agent*	4.0
Caustic soda flakes	1.4
Water	74.6

*"Igepal CA" extra conc. (General Dyestuff Corp., N. Y. C.)

This concentrated solution is diluted with seven to 10 parts of water by the user to produce a milky emulsion that remains stable for 48 to 72 hours.

Products for Laundries

THE mildewing of "wet wash" is another household and laundry problem that is well on its way to solution. In his recent discussion on detergents of the future, Fox (42) remarked that it is not unreasonable to assume that a detergent will be developed which will have antimildewing characteristics. In the meantime, as previously noted, a solution of sodium pentachlorophenate is being offered as a mildew preventive for laundries. It is claimed (35) that by eliminating the need for a strong bleach solution arising from mildew stains, this preparation will help to increase the life of fabrics by as much as 60 per cent. Products of this sort are being made for the laundry industry under private brand names with raw materials supplied by the primary producer.

The mildewing and rotting of shoes and other valuable leather products is another problem that has been attacked along several lines. (4, 43) As a result a large number of substances have been evaluated and various preparations have been developed. For example, the National Bureau of Standards has offered formulas for making several dressings for preserving leather and preventing mildew. One such product, which attracted considerable attention, (44) calls for the use of:

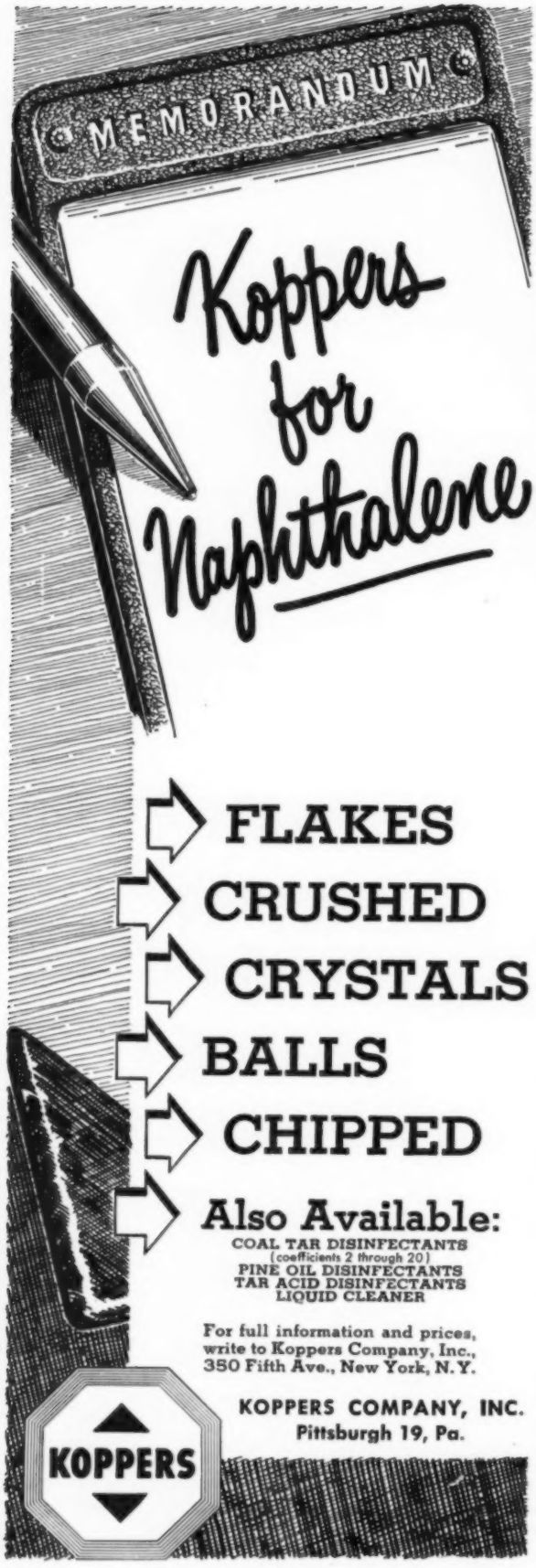
	per cent
Para-nitrophenol	2.0
Mineral oil	10.0
Neatsfoot oil	10.0
Cyclohexanone	10.0
Perchloroethylene or Stoddard's solvent	68.0

In this product, perchloroethylene is preferred over Stoddard's solvent because it is noninflammable. It is said that this formula is now being used by the Army's Quartermaster Corps for the treatment of shoes and other leather items that are to be placed in storage. It is also being employed for reconditioning combat boots that have become mildewed and stiffened in storage. The preparation is not intended for application on articles which make intimate contact with the skin, such as hat bands and gloves.

A modification of this compound has been suggested by investigators (45) at the National Bureau of Standards. In this formula, the dressing contains two per cent each of para-nitrophenol and pentachlorophenol; the amount of perchloroethylene is reduced to 66 per cent.

Also worth noting is a fungicidal, water-resistant treatment for leather equipment. Developed (46) to meet the need for protecting Army Ordnance instrument cases from mold under severe tropical conditions, the most effective products were those containing 2.0 per cent para-nitrophenol or a mixture of 0.3 per cent of this compound with 2.2 per cent of salicylanilide and 33.0 per cent of paraffin wax in an organic solvent.

Before concluding, mention should be made of the growing interest (47, 48) in the incorporation of antifungal agents in paints to prevent mildew discoloration and inhibit mold growth. In most cases, instead of add-



Thousands of Maintenance Managers use AMERICAN STANDARD man-sized wet-mops, sweep mops and applicators exclusively. The nation's most successful distributors regularly supply those thousands of AMERICAN STANDARD enthusiasts.

for both ROUGH and smooth floors

MONEY-BACK GUARANTEE

The new DURA-SORB mophead is revolutionary! Order some and discover for yourself that spun-cellulose DURA-SORB is vastly superior in performance to any other wet-mop—or *your money back!* . . . An independent laboratory report proves DURA-SORB's overwhelming advance over all other mops, regardless of price, material and form . . . Ask for illustrated DURA-SORB folder of details.

"BIG X" SWEEP MOP

This sweep mop is our leader. Snatches up dust on contact. It's nationally famous. A durable giant—available in widths up to 5 feet! Can be removed from the block for washing . . . Once you try BIG X, you'll use no other.

HOLZ-EM APPLICATOR

You'll enjoy the fast, thorough performance of this luxurious, high-speed applicator. Reduces cost of applying wax, seals, varnish, etc. More professional floor finishers use HOLZ-EM than any other applicator.

VICTORY WET MOP

For years our biggest seller. Thousands of maintenance men will use no other. Heavy-duty, quality yarn . . . Your best bet, if you want a cotton mop of extraordinary durability, performance and economy.

JOBBERS: Let us send you trade prices and full details on the new, wonder mop—DURA-SORB . . . Complete catalog of our nationally-advertised mops, applicators, dusters, mitts, and custom-made items, on request.

"TOPS IN MOPS"

AMERICAN STANDARD MFG. COMPANY

Incorporated 1908

CHARLES E. KREBS and WALTER O. KREBS

2515 S. GREEN STREET • CHICAGO 8, ILL.

ing a fungicide to the paint during manufacture, the protective agent is packaged separately for on-the-job mixing, where desired. Preparations containing mercuric chloride or organic mercurials (e.g. phenyl mercurials) are suitable for incorporation in outdoor paints, while for indoor and protein-base paints the phenolics, notably tetrachlorophenol, are employed. (5) The literature of one recently marketed anti-mildew paint additive claims that this material can be incorporated in paints for both interior and exterior surfaces.

Sanitation and maintenance men in the food industries have begun to realize the possibilities of mold inhibiting paints. (49) One such protective paint has proved quite successful in tests (50) carried out with baked goods. Similar indications of efficacy appear in a preliminary report (9) to the meat products industry concerning the action of paints containing copper 8-quinolinolate.

In view of these and other developments it is not surprising that the paint industry should have revised its former position, at least to the extent of providing mold-inhibiting prepared paints for use in food processing plants. (51, 52) The patent literature (53) is also indicative of new developments in fungicidal finishes.

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Trade Marks

(From Page 67)

July 11, 1939.

Topaz—This for soap and liquid synthetic detergent for household and industrial use. Filed Nov. 19, 1948 by Armour and Co., Chicago. Claims use since 1920.

Blendex—This for dishwashing compound. Filed Dec. 9, 1948 by Scott Detergents, Philadelphia. Claims use since Nov. 3, 1948.

Chime—This for cream shampoo. Filed Apr. 16, 1949 by Chime Cosmetics, Inc., New York. Claims use since Mar. 31, 1949.

First—This for antiseptic liquid detergent for use on floors, walls, rugs, etc. Filed Aug. 22, 1949 by Pratt & Smillie Chemicals, Inc., St. Louis. Claims use since Aug., 1948.

Selcodene—This for synthetic floor, wall and woodwork cleaner. Filed Aug. 24, 1949 by Selig Co., Atlanta. Claims use since Mar. 9, 1949.

Wind-O-Sparkle—This for window cleaner and polish. Filed Jan. 15, 1948 by Manson Distributors, Aurora, Ill. Claims use since Nov. 20, 1947.

Plas-Tel—This for combined cleaning and polishing compound for automobiles. Filed Feb. 23, 1949 by Plaze, Inc., St. Louis. Claims use since Dec. 15, 1948.

Per-Em—This for polishing wax for floors, furniture, etc. Filed May 23, 1949 by Per-Em Wax Co., Ipswich, S. Dak. Claims use since Mar. 1, 1949.

Carnaubit—This for carnauba wax. Filed Jan. 3, 1949 by Tilbury Refining Corp., Brooklyn. Claims use since Oct. 29, 1948.

Blot—This for floor absorbent. Filed Feb. 3, 1949 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Jan. 31, 1947.

Caranda—This for vegetable wax for general use. Filed Apr. 5, 1949 by Imex Corp., Philadelphia. Claims use since Jan. 10, 1949.

Carbacryl—This for insecticides and rodenticides. Filed Apr. 13, 1949 by American Cyanamid Co., New York. Claims use since Apr. 14, 1949.

Tepco—This for benzene hexachloride. Filed Nov. 25, 1949 by Tennessee Products & Chemical Corp., Nashville. Claims use since July 10, 1947.

Prolan—This for insecticides. Filed Nov. 30, 1949 by Commercial Solvents Corp., New York. Claims use since Oct. 10, 1949.

Tennant—This for wax in bar form for waxing floors by mechanical means. Filed May 17, 1948 by G. H. Tennant Co., Minneapolis. Claims use since May 2, 1938.

Med-ammin—This for tooth

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powder and paste. Filed June 20, 1949 by Medammin Corp., New York. Claims use since Jan. 1, 1949.

Pura Suds—This for washing preparation for household use. Filed Dec. 11, 1947 by Phipps Products, Inc., Boston. Claims use since Oct. 1, 1946.

Minit-Kote—This for liquid preparation for cleaning metal surfaces. Filed July 24, 1947 by Klem Chemicals, Inc., Dearborn, Mich. Claims use since June, 1944.

Brisk—This for general cleaning compound. Filed Oct. 5, 1948 by U. S. Sanitary Specialties Corp., Chicago. Claims use since Dec. 1, 1947.

Vogue magic—This for white sidewall tire cleaner. Filed Dec. 7, 1948 by Vogue Rubber Co., Chicago. Claims use since Sept. 9, 1948.

Rotol—This for electrical contact cleaning compound. Filed Feb. 16, 1949 by Rotol Chemical Corp., New York. Claims use since Apr. 1, 1948.

Stevex—This for radiator cleaner for automobiles. Filed Feb. 16, 1949 by Stet Chemical Co., South Bend, Ind. Claims use since May 24, 1948.

Aqua Suds—This for liquid soap. Filed Mar. 2, 1949 by Hartman-Leddon, Inc., Philadelphia. Claims use since Feb. 10, 1949.

Brocade—This for toilet soap. Filed Apr. 12, 1949 by Safeway Stores, Inc., Oakland, Calif. Claims use since Feb. 10, 1949.

Vesper—This for toilet soap. Filed Apr. 12, 1949 by Safeway Stores, Inc., Oakland, Calif. Claims use since Feb. 10, 1949.

Coquito—This for soap. Filed May 11, 1949 by Newell-Gutradt Co., San Francisco. Claims use since Apr. 18, 1949.

Sahara—This for waterless hand cleaner. Filed May 11, 1949 by Sahara Waterless Soap Co., Grand Rapids, Mich. Claims use since Dec. 18, 1948.

Milray—This for detergent. Filed May 23, 1949 by Economy Specialty Co., Jersey City, N. J. Claims use since Apr. 29, 1949.

Mirray—This for detergent. Filed May 23, 1949 by Economy Specialty Co., Jersey City, N. J. Claims use since Apr. 29, 1949.

Brisk—This for cleaning compound. Filed June 16, 1949 by Antiseptol Co. division of W. F. Straub & Co., Chicago. Claims use since July 30, 1948.

Formula 40—This for soap. Filed Aug. 23, 1949 by Colgate-Palmolive-Peet Co., Jersey City, N. J. Claims use since Dec. 1, 1935.

Tremendso—This for chemical detergent in powder form for use in dishwashing machines. Filed Sept. 1, 1949 by John Sexton & Co., Chicago. Claims use since July 28, 1949.

Rush—This for soap. Filed Nov. 4, 1949 by M. Werk Co., St. Bernard, O. Claims use since May 24, 1949.

Specialties at Trade Fair

SOAPS and sanitation chemicals of many types were on display in the extensive showing of foreign-made commercial products at the First United States International Trade Fair, held in Chicago recently. Several American manufacturers also exhibited familiar household products.

Considerable attention was paid to a British-made "non-slip" floor wax, or cream because of the unusual guarantee accompanying this product. Made by Furmoto Chemical Co. Ltd., London, England, the non-slip claim was backed, not by the customary money-back offer, but by an accident insurance policy, worth $300, which goes along with every can purchased.

C. Thornfield, proprietor of the London chemical firm, said that the policy which has been in force since 1937, is handled by a leading British insurance company.

Furmoto Chemical Co. organized in Australia in 1912, opened a large London, Eng., plant in 1924. In 1925 another was started in France. Other products bearing the "Furmoto" brand name, and shown at the Chicago Fair, were furniture and car polishes for all types of metal and other surfaces, a cooker cleaner for stoves, a liquid suede cleaner, handbag polishes and cleaners, a reptile shoe polish, "Spectakleer" lens polish, and a universal cleaner for all household uses. This was described as an Australian invention in the form of a neutral soap cake.

Ski wax was much in evidence in displays by Norwegian firms. One company, Reidar-Amundson, of Oslo, Norway, offered one type of wax for skiing on wet snow, another for icy surfaces, a wax for downhill locomotion and another for climbing slopes. Ski polishes to keep the skis bright and shining and weatherproof were also shown. Two other Oslo firms, N. Blomberg and A/S Tento, also showed ski wax. In the wax field, too, vegetable waxes were shown by Shimizuya Komori Wax Mfg. Co. of Kyomachi, Japan.

Naval stores, including rosin, were shown by a number of Greek firms in a cooperative group exhibit. Pan Hellenic Exporters Association of Athens, Greece, had an extensive display of Mediterranean sponges in varied shapes and sizes and for all purposes. C. A. Nevros of New York, who had charge of this exhibit for the Athens trade association, said supplies are in good shape and sponges are again available all over the world.

Greek manufacturers took the lead in number of exhibits of soaps, chiefly for toilet use. But a Belgian trade association, the Federation of Chemical Industries, represented a number of Belgian soapers. F. Norman Holmboe, of Fredrikstand, Norway, displayed a "hair soap," (shampoo) having the brand name "Krinal."

Watford Chemical Co. Ltd., London, England, had an extensive exhibit of varied chemical products, which included insecticides with DDT, detergents, solvents, emulsifiers, resins and waxes.

During the run of the fair the British Information Service issued an official release saying one British firm, not named, had made a million dollar sale of polishing creams to Modern Chemicals, Inc., of Chicago.

Among domestic exhibitors, Arcade Industries, Inc., Chicago, displayed a new mop, the "Arcade Rainbow," with mop head available in such colors as green, yellow, red, blue and white. Made from a plastic-coated, non-woven fabric, the mop is recommended for wet mopping or as a dust cloth. Composition of the fabric makes it possible to keep it sanitary at all times, according to L. J. Kelly, sales manager, who with G. Peter Neville, president, demonstrated the new mop. The company, for some time, has enjoyed considerable export business to South American countries, Hawaii and the Philippine Islands, Mr.

(*Turn to Page* 159)

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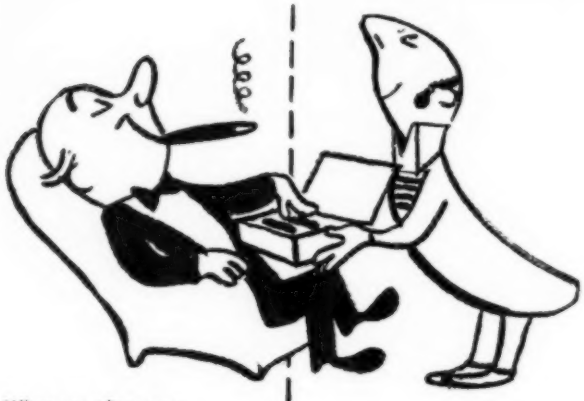

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TRADE NEWS

Smith O'Cedar Advt. Mgr.

Robert E. Smith was recently appointed advertising and sales promotion manager of O-Cedar Corp., Chicago, according to an announcement of George Barnes, president. Mr. Smith has been with the firm since 1942, and was formerly office manager of the department he now heads.

At the same time, Mr. Barnes announced the appointment of Bernard T. Ducey as the firm's sales manager. Mr. Ducey has been associated with the O'Cedar Corp. since 1946, as sales office manager. Prior to that has was Chicago sales manager for Van Cleef Bros. In his new post he will be responsible for sales of all O'Cedar products, including mops, polishes and waxes.

ROBERT E. SMITH

BERNARD T. DUCEY

Daniel M. Calkins Dies

Daniel M. Calkins, one of the founders and later president and board chairman of the Rochester Germicide Co., Rochester, N. Y., died Sept. 12 at the age of 85. He was one of the founders of the National Association of Insecticide and Disinfectant Manufacturers.

Mr. Calkins together with Clarence P. Crowell and George G. Ford founded the Rochester germicide manufacturing and distributing firm in 1892. In the early days of the undertaking the other partners were not active in the business, and Mr. Calkins carried on the work of manufacturing, selling and installing the company's products. Since its formation, the firm has grown into a national oganization with 25 branches located throughout the U. S.

Mr. Calkins served first as the organization's president and later as chairman of the board of directors. A Canadian affiliate, the Canadian Germicide Co., was organized in 1916, and he also served as its president until 1940. He had been in virtual retirement for the past ten years. Survivors include two sons, William S. Calkins, Harlan F. Calkins, and a daughter, Mrs. Willard Eddy.

Sales Execs. Hear Shafer

Harold Shafer, president of Gold Seal Co., Bismarck, N. D., spoke before the Sales Executives Club of Houston, Tex., Sept. 15. Mr. Shafer was in Houston visiting his firm's local sales office. He was to visit cities in the Rio Grande Valley with Carl Kreiner, regional manager, following his stay in Houston.

Diversey Makes Changes

The appointment of R. Peacock, formerly manager of dairy industry sales for Diversey Corp., Chicago, since 1948, has been named sales manager of General Reduction Co., a Diversey subsidiary. The 50-year-old company, which was acquired by Diversey in 1949, mines, processes and markets decolorizing and deodorizing clays for use in processing vegetable oils, etc.

C. E. Glasser, Diversey treasurer and president of General Reduction, was also in charge of sales until recently when he gave up these activities to handle other duties.

Dairy industry sales for Diversey are now being handled by H. A. Reiger, assistant general sales manager and promotional director.

Mr. Peacock has been with Diversey since 1939, and has spent 22 years in food industry sales and service.

R. PEACOCK

Kolker Producing BHC

Commercial production of benzene hexachloride at its new Houston, Tex., plant is now under way, it was announced recently by Kolker Chemical Works, Inc., Newark, N. J. The technical product produced will have a gamma content of 36 per cent.

Open Insecticide Plant

Cook Chemical Co., Kansas City, Mo., currently is planning to open an insecticide plant in Jacksonville, Fla. Negotiations are underway to purchase a tract of land for a 20,000 square foot building. George U. Groschen, vice president and O. T. Cook, Jr., secretary and treasurer, will move to Jacksonville to supervise construction of the plant and to operate the installation when completed.

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C. S. M. A. Meets Dec. 4-5

THE effect of hostilities in Korea and the rearming program in the U. S. on business in general and the chemical specialties industry in particular are among the subjects to be covered at the two-day meeting of the Chemical Specialties Manufacturers Assn., to be held Monday and Tuesday, Dec. 4 and 5 at the Hotel New Yorker, New York.

Other features of the 37th annual meeting of C.S.M.A. include the election of officers and chairman of the five sections of which the association is made up, two symposia, one on new developments in the insecticide field, the other on problems in testing water wax emulsions. In addition, it is planned to have a further discussion of hypochlorites vs quaternaries as disinfectants. This is a continuation of the consideration of the subject discussed at the mid-year meeting of the association. Dr. C. K. Johns, Division of Bacteriology and Dairy Research of the Department of Agriculture of Canada, Ottawa, will act as moderator for the discussion.

Following the pattern of previous meetings, the convention opens officially Monday morning, Dec. 4, with a general discussion session. Reports of the officers will be given. At this session, the general economic outlook is to be discussed by Dr. Leo Barnes, chief economist and editor of *Prentice-Hall Report on the Business Significance of the News* of Prentice-Hall Co., New York. The "Chemical Outlook for 1951," will be covered by Dwight Moody, chemical editor of the *Journal of Commerce* of New York.

Immediately following the group luncheon on Monday afternoon, there will be group meetings of the association's five divisions. At these gatherings, in addition to reports by representatives of the U. S. Dept. of Agriculture, and a review of the Tolerence Hearings in Washington by John D. Conner, C.S.M.A. counsel, the following papers are among those scheduled to be given:

"Dairy Cattle Fly Sprays" by M. H. Doner of J. R. Watkins Co., Winona, Minn. "Household and Cattle Sprayers" by Earl D. Anderson, secretary, National Assn. of Sprayer and Duster Manufacturers. "Insect Resistance" by Dr. William M. Upholt, U. S. Public Health Service, Savannah, Ga. The foregoing papers will be presented at the insecticide division meeting.

Scheduled for the joint aerosol -insecticide divisional meeting are: "A Review of Operations under the Federal Insecticide, Fungicide and Rodenticide Act since its Inception" by Dr. W. G. Reed of the U.S.D.A.; "Toxicity of Chlordane in Aerosols" by Dr. F. P. Heyroth of Kettering Laboratory of Applied Physiology, Univ. of Cincinnati; "General Toxicity" by R. B. Stoddard, U. S. Industrial Chemicals, Inc., New York; "Marketing of Aerosols" by Edmund G. Young, Kinetic Chemicals, Wilmington.

Among the highlights of the wax division meeting, besides the symposium, are: "Silicones in Waxes and Polishes" by C. W. Todd of Dow Corning Corp., Midland, Mich. "Clarification and Purification of Varnishes and Water Emulsion Waxes" by C. M. Ambler of Sharples Corp., Phila.

Melvin Fuld of Fuld Brothers, Inc., Baltimore, is general chairman for the meeting, assisted by the following representatives of the five divisions: Aerosols, H. R. Shepherd; Disinfectants and Sanitizers, H. Lederer; Insecticides, James Green; Soaps and Detergents, Perry G. Bartlett and Waxes, C. L. Weirich.

The cocktail party and banquet are to be held Tuesday evening, Dec. 5, and there will be group luncheons on both days. The Board of Governors meets for luncheon Sunday, Dec. 3, and the various committees meet that afternoon.

Johnson Shifts Woodring

W. H. Woodring, automotive products merchandiser for S. C. Johnson & Co., Racine, Wis., was recently named district manager for the firm with headquarters in Detroit. He was with the firm's household staff until 1944 when he joined the Army. After two years in service he became area manager in Seattle. In his new post he succeeds W. K. Brugiere, who has been named Boston district manager.

New Janitor Supply Firm

Stanton Stores, Inc., 551 5th Ave., New York, recently was incorporated for the distribution of janitor supplies with 200 shares of no par value. Harold S. Bunder is head of the concern.

Issues Warfarin Folder

A folder describing the role of warfarin in rat and mouse control currently is being distributed by Wisconsin Alumni Research Foundation, Madison, Wis. Copies are available upon request.

Pennsalt is 100

Pennsylvania Salt Manufacturing Co., Philadelphia, celebrated its 100th anniversary, Sept. 25. Beginning on that day and continuing through the remainder of the week, various events commemorating the anniversary were held at the company's Whitemarsh Research Laboratories, at Chestnut Hill.

Produces Montan Wax

The plant of the American Lignite Products Co. in Ione, Calif., which was badly damaged by fire late in 1949, has been rebuilt and enlarged. The plant produces montan wax from lignite coal mines in the Buena Vista area in California.

Chemical Sales Course

A two-day clinic for chemical salesmen under the sponsorship of the Salesmen's Association of the American Chemical Industry is scheduled for November 2 and 3 at the Hotel Roosevelt, New York. Subjects on the program include selling fine and heavy chemicals, introducing new chemicals, and service in selling chemicals. Registration blanks may be obtained from the SAACI at 225 Park Ave., New York.

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BRUSH R.P.M.	168	168	168	168
CORD	No.16	No.14	No.14	No.12
CORD LENGTH	40'	40'	40'	50'
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Program for 18th NPCA meeting in Cincinnati October 23-25

THE following is the text of the program for the 18th annual convention of the National Pest Control Association, being held at the Netherland Plaza Hotel, Cincinnati, Monday, Tuesday and Wednesday, Oct. 23-25, as issued in mid-September by William O. Buettner, executive secretary of the association:

MONDAY MORNING — OCTOBER 23
HALL OF MIRRORS

9:00 A.M.—Convention Called to Order, Lee C. Truman
9:20 A.M.—President's Annual Message, Harold E. Jennings
9:40 A.M.—A Message, Avery S. Hoyt
9:45 A.M.—"This is Business," A. E. Ritt
10:15 A.M.—"Salesmanship," Dr. Charles F. Schuller
11:15 A.M.—Closed Business Meeting — Harold E. Jennings, presiding (NPCA Active Members Only)
12:15 P.M.—Luncheon—Pavillon Caprice—Speaker, Fred Giesel

MONDAY AFTERNOON
(Three Concurrent Sessions)

GROUP A: Hall of Mirrors—J. Harvey Sturgeon, presiding
"How to Train the Serviceman," Herman L. Fellton
"The PCO and Serviceman—Customer Relationship," Lee C. Truman
"Customers — Where to Find Them and to Whom Do They Belong," Harry Studier

GROUP B: Parlors A-B-C-D — Alva H. Bender, presiding
"A Termite Exhibit Inspired by the ARP's," Alva H. Bender
"Cooperation in the Development of Approved Reference Procedures," Dr. Thomas E. Snyder
"Approved Reference Procedures for Subterranean Termite Control," Dr. Ralph E. Heal. Assisted by: Frederick J. Bowers, George L. Hockenyos, J. L. Howell, Robert B. Messecher

GROUP C: Parlors E-F — J. Edwin Sameth, presiding
"New Developments and Techniques in Rodent Control," Walter W. Dykstra
"Lindane," Speaker to be announced
"Fly Control in 1950," Dr. Fred C. Bishopp

MONDAY EVENING — PAVILLON CAPRICE—8:30 P.M.
Annual Reunion—Informal get-together—Refreshments

TUESDAY MORNING — OCTOBER 24
HALL OF MIRRORS
Harold E. Jennings, presiding

9:30 A.M.—Introductory Remarks, E. R. Jennings
9:10 A.M.—"Public Relations and Its Value to the Pest Control Industry," W. Moscrip Miller
10:10 A.M.—"Using Insecticides Safely," Dr. Fred C. Bishopp
10:40 A.M.—"Telephone Courtesy" — A demonstration by the Cincinnati & Surburban Bell Telephone Company, E. L. Newhall
11:15 A.M.—Ethics Symposium, Prof. J. J. Davis, George C. Young, Dr. H. K. Steckel

TUESDAY AFTERNOON
HALL OF MIRRORS

2:00 P.M.—Business operations and management problems — Harold E. Jennings
After introductory remarks, the group will separate
"Less Than Six Servicemen"—Hall of Mirrors
"Six and More Servicemen"—Parlors A-B-C-D
4:00 P.M.—Committee Meetings
Ethics, Martin T. Meyer, Room A
Fumigation, T. F. Winburn, Room B
Finance, A. W. Price, Room C
Public Relations, F. E. Bohman, Room D
Bids & Specifications, C. W. Houghton, Room E
Advertising, Herman Militzer, B. C. Scherzinger, & Leon A. Moore, Room F
Termite Control, George L. Hockenyos, Room G
Rodent Control, Joseph J. Wineburgh, Room H

TUESDAY EVENING — PAVILLON CAPRICE
7:30 P.M.—Buffet Supper
8:30 P.M.—Countess Maria Pulaski

WEDNESDAY MORNING — OCTOBER 25— HALL OF MIRRORS—9:00 A.M.—Bartlett W. Eldredge, presiding
Sanitation Session: "The Place of the PCO in Food Industry Sanitation," Charles A. Clark
"Pest Control Problems in Federally Inspected Meat Establishments," Dr. R. K. Somers
"The Food and Drug Administration Looks at the Pest Control Operator and the Food Manufacturer," Dr. Kenneth L. Milsted
"Truth or Consequences," Bartlett W. Eldredge
Open forum discussion
12:15 P.M.—Luncheon—Pavillon Caprice—Speaker, Karl T. Finn

WEDNESDAY AFTERNOON
HALL OF MIRRORS

2:00 P.M.—"Courses for the PCO," John V. Osmun
2:20 P.M.—"The War Situation and Effect on the PCO," William O. Buettner
2:40 P.M.—*GROUP A*—Hall of Mirrors—Martin T. Meyer, presiding
"Mothproofing Problems," Dr. Ralph E. Heal
"Group Insurance," William O. Buettner
"Pension Plans," Tracy Evans
2:40 P.M.—*GROUP B*—Parlors A-B-C-D—Alva H. Bender, presiding
"Good Public Relations When Legislation is Enforced," Carl H. Ticer
"Dry Wood Termite Control and Newer Chemicals," Karl Hassler
4:00 P.M.—Hall of Mirrors—Harold E. Jennings, presiding
Concluding business session (NPCA Active Members Only)

WEDNESDAY EVENING — OCTOBER 25—PAVILLON CAPRICE
7:00 P.M.—Annual Banquet.

Purdue PCO Conference

The annual pest control conference sponsored by Purdue University and the National Pest Control Assn. is scheduled to be held February 5-9, 1951. The conference's topic is ant control.

Abeles SAACI Golf Winner

Joseph A. Abeles of Faesy & Besthoff, Inc. was presented with the Chemists' Club Award for scoring low gross at the final golf outing of the Salesmen's Association of the American Chemical Industry, held at Westchester Country Club, Rye, N. Y., September 12.

Second low gross in flight A was Thomas Morgan of MacNair Dorland Co., while low net winner was Russell Boland of Topics Publishing Co.

Flight B winners were: low gross, Charles Goodale, E. I. du Pont de Nemours & Co.; second low gross, Harold Weaver, Colonial Chemical Co.; low net, C. O. Lind, Dow Chemical Co. and second low net, John V. McGrevy, Merchants Chemical Co.

Flight C winners were: low gross, George A. Wright, du Pont; second low gross, E. J. Maguire, du Pont; low net, Jack Butler, Industrial Chemical Sales Division of West Virginia Pulp & Paper Co., and second low net, Harry W. Walker II, St. Regis Paper Co.

Kicker winners were Foster L. Jones, Nopco Chemical Co., in flight B and Edward Kells, Corn Products Refining Co., in flight C.

Leon Miller of Barrett Division of Allied Chemical & Dye Corp. won the putting contest, Robert Hutchins of Commercial Solvents Corp. had the longest drive, and George J. Bruyn of Hooker Electrochemical Co. was nearest to the pin.

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New Chemical Specialties ACS Topics

NEW developments in sanitation chemistry were among the subjects covered in the 1,181 papers read at various sectional conferences at the 118th national meeting of the American Chemical Society in Chicago, Sept. 3-8. The meeting was attended by over 9,000 chemists, chemical engineers, government scientists and others.

During the sessions of the A.C. S. at the Stevens and four other hotels, the Chicago Colliseum was the scene of the Sixth National Chemical Exposition, sponsored by the Chicago section of the Society. Many new and standard chemicals, chemical raw materials and equipment were displayed by over 150 manufacturers.

The educational feature, "Chemical Trail Blazers", at which new developments in chemistry were graphically displayed, was a highlight of this year's affair. The comparative cleansing abilities of various dishwashing compounds were shown in an exhibit sponsored by the U. S. Public Health Service. Also portrayed was the work of Wisconsin Alumni Research Foundation in developing the new anti-coagulant rodenticide, warfarin. The insecticidal material, allethrin, was presented in an exhibit of the Carbide and Carbon Chemicals Division of Union Carbide and Carbon Corp.

The quaternary ammonium compounds as antiseptics and germicides were discussed in a paper read at one of the sessions by Dr. Earl T. McBee of Purdue University. He discussed the effectiveness of these compounds, mentioning particularly their reduced degree of skin irritation.

A new theory of the anti-virus and anti-bacteria action of certain types of detergents and certain natural fatty substances called lino-proteins was expounded by Dr. F. F. Nord and Dr. Serge N. Timashefe of Fordham University. The paper, presented before the division of biological chemistry, explained how the two classes of compounds unite chemically with the protein matter in viruses and bacteria, rendering them harmless.

The mode of operation of petroleum oils as mosquito larvicides was discussed by Dr. H. H. Stage of the U. S. Department of Agriculture. He pointed out that it is not true that petroleum oils kill mosquito larvae by suffocation because they cannot thrust their breathing tubes through the oil film on the water to get oxygen. Actually, the toxicity of the petroleum oils as mosquito larvicides increases with their volatility. The lethal effects are produced by penetration of the tracheal tissues by the volatile gases of the oils. Mechanical suffocation may, of course, be brought about by actual contact with the heaviest and least volatile oils," he said.

Addition of DDT and other synthetic hydrocarbon insecticides has increased the efficiency of the oils several times, the speaker said. He also noted that with increased use of the new toxicants, the comparable volume of oils used in mosquito control work has dropped considerably.

The growing use of DDT as an insecticide has created interest in solvents for these materials, two members of the research department of Standard Oil Co. (Ind.), J. W. Arkes and G. W. Flint, commented in a joint paper during this symposium.

While straight chain hydrocarbons could not be used to obtain concentrated DDT solutions, their paper said, the ring type hydrocarbons and ketones were good solvents for this insecticide. Also a ring type, cyclic hydrocarbon ketone makes for a more concentrated solution, than the straight chain, paraffinic ketone. It was noted that the solubility of DDT in ketones decreases with increasing molecular weight.

For maximum efficiency of performance, particle size in oil insecticidal sprays should vary according to conditions, asserted A. H. Yeomans of the Bureau of Entomology and Plant Quarantine, U. S. D. A. Particle size of insecticidal sprays, he said, must be related to the ability of the spray to be transported and deposited; to possible foliage injury; the efficiency of residues in killing insects; to whether the spray is for indoor or outdoor use; and to the time available for settling.

For example, he said, in a large closed warehouse containing packaged food, the optimum particle size has been found to lie between one and five microns in diameter. But if allowable settling time is short, the particle size must be increased according to known laws for settling rates and deposit of particles on objects in moving air streams, as correlated with actual conditions.

If time of application is limited to about 15 minutes, particle size for the same conditions would range from 15 to 30 microns diameter. Optimum particle size is affected by the particular insect to be killed, Mr. Yeomans also stated. To kill adult houseflies, for instance, would take a bomb with particle size of 15 to 20 microns diameter, but for control of adult mosquitoes a 10 to 15 micron diameter would be needed.

In the sessions of the Society's division of biological chemistry the discovery was announced, of an antibiotic related to streptomycin and terramycin, which shows promise as a weapon against clothes moth larvae and the black carpet beetle.

Named "Netropsin," this substance was developed in a Brooklyn, N. Y. pharmaceutical laboratory. Studies with animals indicated that the compound has a degree of toxicity which may limit its use in treatment of human infections. It was, however, found to have a lethal effect on a wide variety of microorganisms and further application for insect control. This discovery, it was pointed out, opens a broad new field for application of soil-born antibiotics in agriculture and industry.

The Chicago meeting brought announcement by Dr. Martin Jacobsen of the U.S.D.A. of a new insecticide named "Scabrin," which is derived from the roots of a common weed, the oxeye.

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times as powerful as pyrethrum, Dr. Jacobsen said, but it is extremely short lived, losing its insecticidal powers within a week if kept at ordinary temperatures. It will, however, remain stable for several weeks if kept in the cold, under an inert gas, such as nitrogen, or in tightly sealed containers. Scabrin is also stable at ordinary room temperature when kept in solution.

Oxeye is found over most of the United States, growing on dry soils and along river banks as a perennial weed from two to five feet tall. Dr. Jacobsen expressed hope that it may be developed as a commercial agricultural crop in the near future.

At the Chemical Society's annual banquet during the Chicago sessions, eight chemists were named winners of high awards, either sponsored by or administered by the Society. Among these the Fritzsche Award of $1,000 and a gold medal went to a foreign scientist, Dr. Edgar Lederer, of the Institut de Biologie Physico-Chimique, Paris, France, for his work in the field of essential oils.

During the sessions of the Chemical Society at the Stevens and four other hotels the Chicago Coliseum was the scene of the 6th National Chemical Exposition, sponsored by the Chicago section of the A.C.S. Here were displayed many new as well as standard raw chemicals and improved chemical apparatus, produced or manufactured by over 150 concerns.

In the popular educational feature, "Chemical Trail Blazers," which presented in graphic form outstanding new developments in chemistry, was a display, made by the U. S. Public Health Service, which shows the comparative cleansing ability of various dishwashing detergents. The Wisconsin Alumni Research Foundation's work in developing the new rodenticide, warfarin, was portrayed in another panel, and allethrin was presented by the Carbide and Carbon Chemicals division of Union Carbide and Carbon Corp. During the week a continuous showing was made of 37 industrial motion pictures largely relating to the application of chemistry to daily living. An attendance of over 40,000 was reported.

New Felton Dallas Office

The opening of a new office and salesroom at 209 N. Hawkins St., Dallas, Tex., was announced recently by Frank Brumburgh, sales manager of Felton Chemical Co., Brooklyn. Herbert D. Berger, who had previously served as a Felton field representative in other areas, is in charge of the new office. He holds a B.S. degree in chemistry and is a veteran of World War II. The new Dallas office will serve customers in Texas and Western Louisiana.

HERBERT D. BERGER

French Joins Pfister

C. W. (Larry) French, for the past 15 years with Oldbury Electro-Chemical Co., New York, the last five of which he was manager of phosphorus compounds, recently joined Pfister Chemical Works, Inc., Ridgefield, N. J. He is a 1935 graduate of Dartmouth College, where he majored in chemistry. He is a member of the American Chemical Society, the American Institute of Chemists, the Salesmen's Association of the American Chemical Industry, the Commercial Chemical Development Association and the New England Chemical Club.

C. W. FRENCH

Named by Koppers

Appointment of Dr. E. W. Volkmann and Dr. F. L. Jones as assistant managers of the Research Department, Koppers Company, Inc., was announced last month by Dr. G. F. D'Alelio, vice-president and manager of the research department. Dr. D'Alelio also announced that Dr. W. J. Monacelli, recently named acting manager of the department's Patents Section, now has been named manager of that section.

Stanley Plans Expansion

A general wage increase for all employes, plans for expansion into the industrial sales field, and the expenditure of $900,000 to provide additional plant facilities for Stanley Home Products, Inc., Westfield, Mass., were announced recently by F. Stanley Beveridge, president.

The general wage increase, amounting to five cents an hour for each Stanley employe, became effective September 29 and represents an additional expenditure by the company of $152,000. On the same date the company distributed a quarterly bonus of $216,000 to all employees.

He also announced that the company will enter the industrial sales field and service schools, hospitals, city sanitation departments, and industries, and named Nelson Parsons of Windsor, Conn. as head of this new division. The company's construction plans call for the enlargement of its Easthampton plant to include an additional 150,000 square feet of floor space.

Mr. Beveridge stated that the company's profit-sharing retirement fund had reached $1,400,000 and that additional insurance benefits are effective immediately, including life insurance increases of 20 per cent. Company sales in August were 25 per cent higher than those for the preceding month, he pointed out.

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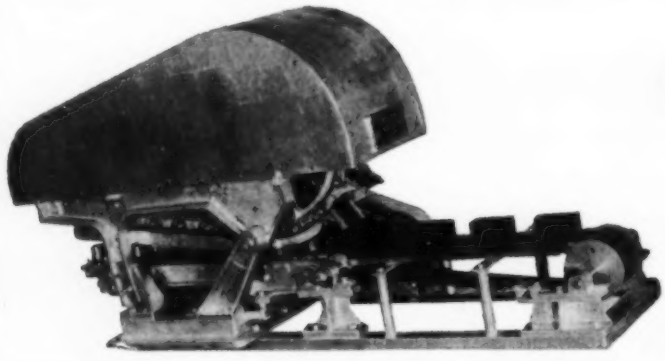

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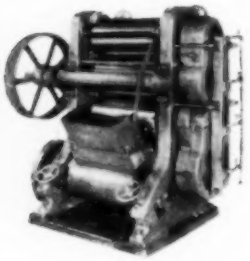

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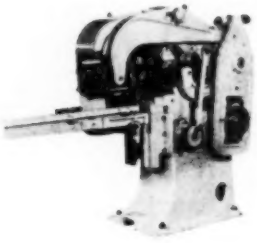
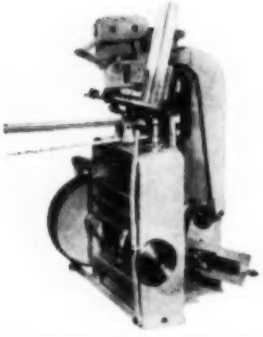


Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



JONES Vertical Type AUTOMATIC Toilet Soap Press.

SPECIAL BARGAIN

P & S SOAP CHIP DRYER — 5 Fan — 3 Screen — Apron 5 Roll or 2 Roll Set heating coils — excellent condition cheap — for prompt delivery.

ADDITIONAL REBUILT SOAP MACHINERY

- H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacket Crutchers.
- Dopp Steam Jacketed Crutchers. 1000, 1200, 1500 lbs. and 800 gals. capacity.
- Ralston Automatic Soap Presses.
- Scouring Soap Presses.
- Empire State, Dopp & Crosby Foot Presses.
- 2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
- H-A 4 and 5 roll Steel Mills.
- H-A Automatic and Hand-Power slabbers.
- Proctor & Schwartz Bar Soap Dryers.
- Blanchard No. 10-A and No. 14 Soap Powder Mills.
- J. H. Day Jaw Soap Crusher.
- H-A 6, 8 and 10 inch Single Screw Plodders.
- Allbright-Nell 10 inch Plodders.
- Filling and Weighing Machine for Flakes, Powders, etc.
- Steel Soap frames, all sizes.
- Steam Jacketed Soap Remelters.
- Automatic Soap Wrapping Machines.
- Glycerin Evaporators, Pumps.
- Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
- Perrin 18 inch Filter Press with Jacketed Plates.
- Gedge-Gray Mixers, 20 to 6000 lbs. capacity, with and without Sifter Tops.
- Day Grinding and Sifting Machinery.
- Schultz-O'Neill Mills.
- Day Pony Mixers.
- Gardiner Sifter and Mixer.
- Proctor & Schwartz large roll Soap Chip Dryers complete.
- Dopp Steam Jacketed Soap crutchers, 1000, 1200 and 1350 lbs. capacity.
- Day Talcum Powder Mixers.
- All types and sizes—Tanks and Kettles.
- Ralston and H-A Automatic Cutting Tables.
- Soap Dies for Foot and Automatic Presses.
- Broughton Soap Powder Mixers.
- Williams Crusher and Pulverizer.
- National Filling and Weighing Machines.

Send us a list of your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY

1051-59 West 35th St., Chicago 9, Ill. Phone Yards 7-3665; 7-3666

Our Fifty Years of Soap Experience Can Help Solve Your Problems

Stillwell and Gladding, Inc.

Analytical and Consulting Chemists

Members Association of Consulting Chemists and Chemical Engineers

130 Cedar St., New York City 6

E. G. THOMSSEN, Ph.D.

•

Consultant on plant lay-out equipment design and product formulation for manufacturers of insecticides, disinfectants, floor waxes, soaps and allied products.

•

306 Center St., Winona, Minn.

Chemical Engineers

Contracting — Consulting

Complete Plants and Engineering Services for:
Glycerine — Fats and Oils
Soaps — Hydrogenation
Fatty Acids — Hydrogen

Research, Reports, Investigations

WURSTER & SANGER, INC.

52nd Street and S. Kenwood Avenue
Chicago 15, Illinois

CLASSIFIED

Classified Advertising — All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap & Sanitary Chemicals*, 254 West 31st St., New York 1.

Positions Open

Chemist - Entomologist (Ph.D.) Outstanding man wanted to head service department of large, rapidly expanding pest control firm with home offices in Pittsburgh and branches in 18 cities. Candidate should have seasoned experience in insect toxicology, economic entomology and field work. This is an important position for a man possessing managerial ability plus. Salary commensurate with ability and experience. All replies strictly confidential. Submit account of academic and professional training, past affiliations, earnings, photo and any other pertinent facts to: Mr. L. L. Crosby, President — Commonwealth Sanitation Co., 3567 Bigelow Boulevard, Pittsburgh 13, Pa.

Soap-Kettle Man (soap boiler), dryer operator and other supervisory personnel for soap factory, making soap chips, toilet soap milled, and floating soap. N. Y. C. location. Address Box 262, c/o *Soap*.

Manufacturing Chemist capable of handling production of chemical specialties, sanitary chemicals and insecticides. Must be capable of taking full charge of all production problems from equipment through finished products. Party must be willing to locate in leading Texas city. Company representative will be in New York City November 2nd through November 15th. Address Box 263, c/o *Soap*.

Salesman Wanted for prominent line of liquid soap dispensers for jobbing trade. Give full details in your first letter. Address Box 264, c/o *Soap*.

Positions Wanted

Soapmaker—over twenty years practical experience boiling laundry and toilet soaps. Also experienced in manufacture of cold made soaps and cleansers. Address Box 265, c/o *Soap*.

Combination Chemist—working superintendent. Experimental soapmaker for small specialty plant. Nineteen years experience in laboratory and plant work on potash oil soaps, liquid and powdered cleaning compounds, metal cleaners and toilet goods products. Free to relocate. Address Box 266, c/o *Soap*.

Miscellaneous

New Product Available — Dust Absorber — absorbs dust and lint. Doesn't stain. Ideal for dust mops and cloths. Makes waxed floors gleam; restores beauty of woodwork. S. Parlee Co., 829 Ft. Wayne Ave., Indianapolis 2, Ind.

Will purchase Immediately: Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box 267, c/o *Soap*.

Distributors Wanted: Established manufacturer of exclusive line palm soap powders with 15 years experience and AAA1 rating seeking distributors calling on automatic laundries. Write for full information stating territory covered. Address Box 268, c/o *Soap*.

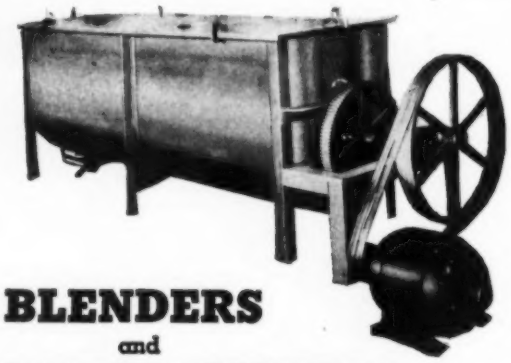
Wanted: Chemicals — Alkalies —Colors—Solvents—Drugs—Oils and Foots. Soaps—Other Supplies. Chemical Service Corp., 92-06 Beaver St., New York 5. Tel.: HAnover 2-6970.

Wanted: Large engineering firm wishes to acquire several complete soap plants through purchase of (1) capital stock, (2) assets, (3) machinery and equipment, whole or in part. Personnel retained where possible, strictest confidence. Address Box 1215, 1474 Broadway, New York 18, N. Y.

For Sale

Well Established sanitary supply business equipped for the manufacture of floor waxes, oil soaps, soap powder, disinfectants, insecticides and many allied products. Inventory $20,000 raw materials. Location in the middle west. Owner wishes to retire. Address Box 269, c/o *Soap*.

Insecticide And Chemical Mfg., Distributing Concern, Houston, Texas. This is the opportunity of a lifetime for an individual or sales-managers, salesmen, entomologists and chemists to get into an established business for themselves, with nominal investment by pooling their resources and acquiring a going incorporated business with proven consumer acceptance formulations, trademarks, equipment, inventory and a substantial number of accounts sending in repeat orders throughout the year. This corporation is now engaged in formulating and distributing in the small package field of insecticides, fungicides and pest control products, being featured by leading nurseries, landscape concerns, green houses, florists, department, seed, feed, drug stores, of southern states from New Mexico to Carolinas. Owners desire to retire from the business and will give liberal terms to parties of ability and



BLENDERS
and
BATCH MIXERS

Ideal for: Dry powders — semi-liquids
pastes — granular materials

- **Easy cleaning** • **Ball bearings**
- **Special design packing glands**
- **Dust tight** • **Leakproof** • **Watertight**

Also manufacturers of Agitators, Kettles, Powder and Paste Fillers, Conveyors.

ASK FOR CATALOG 43

R GEORGE G. RODGERS CO. Inc.
2401 THIRD AVE. NEW YORK 51, N. Y.

CROSBY

THE MARK OF QUALITY

FOR SUPERIOR
SOAPS and DISINFECTANTS
DEMAND
CROSBY
PALE WOOD ROSINS
TERPINEOLS
PINE OILS

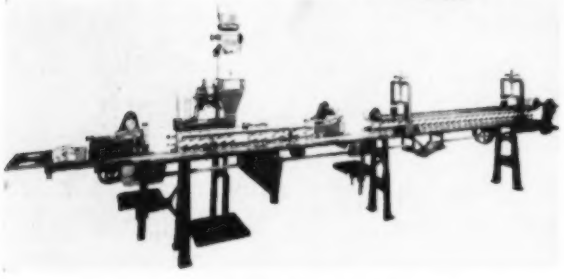
UNIFORM
HIGH QUALITY

ALL PALE ROSINS AVAILABLE IN NEW TYPE, LIGHT TARE, SCRAP VALUE, ALUMINUM DRUMS.

REPRESENTATIVES IN ALL PRINCIPAL CITIES

CROSBY CHEMICALS, INC.
DE RIDDER, LOUISIANA
Plants: Picayune, Miss., and De Ridder, La.

From 4 ounces TO 5 pounds



. . . that's the range of carton sizes this low cost machine is capable of weighing, filling and sealing!

THIS combination of SA top-and-bottom semi-automatic carton sealer and SH Net Weigher is "tops" for low cost flexible production—only two operators needed. Just the thing for up to 12,000 packages per day output—ideal also for short runs of private brands or sample lines. WRITE for BULLETIN.

TRIANGLE PACKAGE MACHINERY CO.
6639 W. DIVERSEY AVENUE, CHICAGO 35
Offices: New York, San Francisco, Los Angeles, Boston, Jacksonville, Baltimore, Dallas, Portland, Denver

Petrolite Crown EMULSIFIABLE WAXES FOR EMULSION POLISHES

Petrolite Microcrystalline Waxes possess many physical qualities which suit them particularly for the manufacture of emulsion polishes. The specifications below are for three Petrolite waxes which have proved themselves in the "dry-bright" polish field. Samples and complete technical data will be sent to you on request.

Crown Wax No.	Melting Point °F	Penetration 100 g., 5 sec.	Color N.P.A.	Acid Number	Saponification Number
23	180/185	6 max.	6 max.	20-25	55-65
36	180/185	8 max.	8 max.	30-35	85-95
1035	195/200	2 max.	2½ max.	Nil	Nil

PETROLITE Crown WAX
PETROLITE CORPORATION, LTD. WAX DIVISION
30 BROAD STREET, NEW YORK 4, N. Y.
REFINERY: BOX 390, KILGORE, TEXAS

For Sale

integrity. You may reply in strict confidence giving your history and amount of cash capital you are able to invest. Address Box 271, c/o *Soap*.

Chemical Company manufacturing and distribution. Industrial, dairy and agriculture. St. Louis and Illinois markets. Trade marks and formulas. Active concern. Address Box 270, c/o *Soap*.

For Sale: J. H. Day, double arm sigma blade mixer 24"x24"x18" deep, tilting discharge. Plant Equipment Co., Cincinnati 3, Ohio.

For Sale: Paste soap dispensers —heavy steel-nickel plated—durable —practical. Sample on approval $4.65. National Dispenser Co., 10210 LaSalle Ave., Los Angeles 47, Calif.

For Sale: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, pressers, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

For Sale: Mikro pulverizers #1SH, 3HP. Other sizes. Allbright-Nell 4'x9' chilling rolls. Lehmann 4 roll W.C. 12"x36" steel mill. Houchin 8½"x16" 3 roll & 18"x30" 4 roll Granite Stone Mills. Anderson No. 1 Expellers. Jack. kettles & tanks, iron, copper, alum., stainless. Dryers vac & atmos. Jones automatic soap presses. Soap frames. Automatic soap chip dryer. Slabbers & cutting tables hand & Power. Crutchers. Blanchard #14 soap powder mill. 6 knife chipper. Foot presses. Filter presses 12" to 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines. Grinders.

For Sale

Hammer mills. Mikro pulverizers. Colloid mills. Three roll steel mills, 3"x9", 9"x32", 12"x30" & 16"x40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 90 West St., N. Y. 6, N. Y. WOrth 2-5745.

For Sale: 2 Crutchers 1500#. Horiz. ribbon powder mixers: 50#. 100#, 200#, 800#, 1500#, 5000#. Stainless clad jacketed kettles, 30 gal., 40 gal., 60 gal., 80 gal., 100 gal., 150 gal. Large stock stainless steel tanks all sizes. Perry Equipment Corp., 1510 W. Thompson St., Phila. 21, Pa.

For Sale: Two 200 gallon full jacketed Dopp Kettles with type "L" agitator. Also other chemical equipment. Allied Steel & Equipment Co., Dept. W., Chester, New Jersey.

For Sale: 1 — Proctor & Schwartz 4-section Soap Chip Dryer, with 5 roll Houchin Cooling Rolls; 1—Pkge. Mach. Co. N-1 Laundry & Toilet Bar wrapping machine; 1—Houchin hand soap slabber; 1—3500 lb. vertical jacketed crutcher, m.d., 1—Houchin 4-roll inclined Granite Mill, 18" x 30" rolls, pulley drive; 2 Jones vertical type B, toilet soap presses; 3—Houchin 3" soap strainers; 50-1200 lb. soap frames; 2—Sperry 36" x 36" recessed filter presses, 60 plates; 1—Dopp cast iron 600 gallon jacketed kettle; 1—Allbright-Nell 4' x 9' Chilling Roll. Only a partial list. Send us your inquiries. Consolidated Products Co., Inc., 15-21 Park Row, New York 7, N. Y., Barclay 7-0600. Cable address: Equipment, N. Y.

For Sale: — see advertisement page 98.

Chi. Trade Fair

(*From Page* 143)

Kelly said, and Chicago's international trade fair seemed an ideal opportunity to build further overseas trade.

Chase Products Co., Maywod, Ill., exhibited their full line of pressurized aerosal units for dispensing insecticides, deodorants, enamels, paints and waxes, with C. W. Svendson, president, directing demonstrations.

Gold Seal Co., Bismarck, N. D., and Chicago, showed their recently introduced powdered "Snowy Bleach" for laundry use, "Glass Wax," a self-polishing paste floor wax and a furniture cleaner-polisher. Steiner Sales Corp., Chicago, displayed washroom towel dispensers, while Lily-Tulip Cup Corp., New York, featured its paper drinking cups and food containers.

Forty-six foreign nations joined with the United States in the Chicago International Trade Fair, which also had the backing of the Economic Cooperation Administration, the U. S. Dept. of Commerce, and other government agencies.

Eight miles of exhibits of consumer goods were set up on Chicago's Navy Pier, and another extensive display of heavy industrial equipment and raw materials of commerce, was located at the International Amphitheatre.

Riedeburg Associates Move

Theodore Riedeburg Associates, sales representatives for Emulsol Corp., Chicago, and Chase Products Co., Maywood, Ill., recently moved to 230 Park Ave., New York.

CHOICE REBUILT EQUIPMENT

UNION Rebuilt Machinery Established 1912

Mikro 4TH, 2TH, 1SH and Bantam Pulverizers, Jay Bee Mills U1 and 3AT, Schutz O'Neill, Williams, Stedman and Reitz Mills.
Stokes, Baker Perkins BB and Readco, Day, Hottman Mixers.
B.P. Jumbo type 3500 gal. Steam Jacketed Double Arm Sigma Blade Mixer.
Day & Robinson 100, 600, 2500, 4000 lbs. Dry Powder Mixers and Sifters.
Day 40 and 80 gal. Brighton Change-Can Mixer.
R. A. Jones Model Model E Automatic Soap Press, ½ to 4½ oz. cakes.

THIS IS ONLY A PARTIAL LISTING
ACT NOW FOR CHOICEST SELECTIONS
Tell Us Your Requirements

Immediate Delivery—At Great Savings

A.M.F. Soap Amalgamators, 50 to 200 gallon capacities.
Houchin Aiken and National Equipment 3 to 5 Roll Soap Mills.
Stokes and Smith G1 and G4 Auger Powder Fillers.
Pneumatic Scale Auto. Carton Filling, Lining and Closing Machines.
Filler 1, 2, 4, and 8 Head Stainless Steel Automatic Piston Fillers.
Pneumatic Scale Co. Automatic Labeler.
Knapp E adj. Wraparound and Spot Labeler, 1 gal. (for jars with ears).
Pony M, ML and MX Labelrites, Ermold and World Semi-Automatic and Fully Automatic Rotary and Straightaway Labelers.
Triangle Model SHA Automatic Net Weigher and Carton Sealer.
Standard Knapp No. 429 Carton Sealer, 11 ft. Compression Unit.
Colton 4 PF Cream Filler.
Shriver, Republic, Sweetland, Alsop, Vallez and Sperry Filter Presses.
Package Machinery FA, FA2, FA2Q; Scandia Wrappers.

Union STANDARD EQUIPMENT CO.
318-322 LAFAYETTE ST., NEW YORK 12, N.Y.

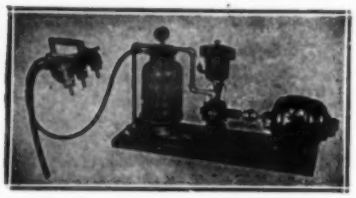
BOTTLING OPERATIONS SIMPLIFIED

"SCIENTIFIC"

PORTABLE

VACUUM FILLER

Fills directly from drum, pail or demijohn; no overhead tanks required. Suitable for bench or tray work; also fills containers in original shipping cartons.



FOR perfumes
to nail polish
meat sauces
to silver polish

FOR Pharmaceuticals, Extracts, Syrups, Beverages, Wines, Whiskies, Insecticides, Washing Fluids, Chemicals, etc.

FILLS vials to gallons; all cans including quarts. Our many years of "Know-How" at your disposal in making special filling handles for every shape of container, every type of liquid. Quick change-overs. Cleans itself automatically in 5 minutes.

OUTPUT about 50 to 150 gross daily.

ACTUALLY PAYS FOR ITSELF IN A FEW WEEKS!

SCIENTIFIC FILTER CO.

mfrs. Filters; Filling, Capping, Labeling Mchry.

59 ROSE STREET, NEW YORK CITY 7, N. Y.

For Detergent Evaluation

ARTIFICIALLY SOILED WOOL for Light Duty Detergents.
PSC STANDARD SOILED COTTON for Heavy Duty Detergents.

We will sell you the swatches for your own determination

OR—We will conduct Hunter Reflectometer Brilliance Tests.

Write for Details and Prices

FOSTER D. SNELL INC.

RESEARCH

CHEMISTS · ENGINEERS

LABORATORIES

29 W 15TH ST. NEW YORK 11, N.Y.

WATKINS 4-8800

A-M-R

DEODORANT

BLOCK

Also: OBLONG BLOCK (Weight, 24 oz.) For WALL DEODORANT CASE and TOILET BOWL DEODORIZER.

"NONE-BETTER" For LOWER COSTS and GREATER PROFITS

"NONE-BETTER" For QUALITY and CUSTOMER SATISFACTION

Made to the highest specifications with pure 100% Paradichlorobenzene and blended with long-lasting perfume oils, it's the last word in urinal deodorizers. Also other uses.

Protected and neatly wrapped in cellophane and packed in handsome containers to prevent evaporation.

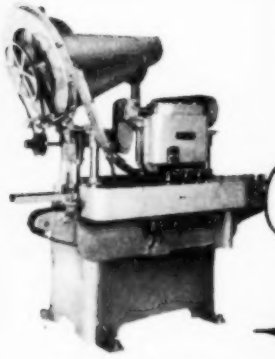
AVAILABLE WITH YOUR PRIVATE LABEL AT NO EXTRA CHARGE

Ask about A.M.R. NUGGETS & CRYSTALS. Sold in 1-2-3-5 lb. GLASS JARS. Also in 1 and 5 lb. TINS.

Write for Prices and Samples. No obligation.

A. M. R. CHEMICAL CO., Inc. 985 EAST 35th STREET Brooklyn 10, N. Y.

Some Sales Territories Still Available for Representation



Tops them all

resina cappers

New Model XRU

HIGH SPEED
straight line screw capper

FLEXIBLE • FAST
FULLY AUTOMATIC

send for descriptive folder

OTHER TYPE CAPPERS AVAILABLE

RESINA Automatic Machinery Co., Inc.

COURT & CREAMER ST., BROOKLYN 31, NEW YORK

F. T. C. Wax Rules Meeting

Considerable discussion of the definition of the industry's product highlighted the conference on proposed trade practice rules for the floor wax products industry held in Washington, Sept. 13, by the Federal Trade Commission. Some industry representatives questioned the need for such trade practice rules. Other terms discussed at the meting included: "beautifying, cleaning, protecting of floor surfaces, slip retardant, water resistance," etc.

It is expected a set of proposed rules to replace those issued June 22, 1949, will be released in the near future. Hearings on the new rules may or may not be held.

Aerosol Report

A 51-page report, entitled "Agencies and Regulations of Interest to Pressure Packaging Industry" was released recently by the Chemical Specialties Manufacturers Assn. The report was prepared by the Sub-Committee on Public Relations of the Aerosol Scientific Committee. It was prepared under the direction of E. G. Young of Kinetic Chemicals, Inc., Wilmington, chairman of the Aerosol Scientific Committee and W. E. Graham of Crown Can Co., Philadelphia, chairman of the Committee's Sub-Committee on Public Relations.

ASTM Wax Comm. Meets

Dr. W. W. Walton, National Bureau of Standards; Dr. J. Vernon Steinle of S. C. Johnson & Sons, Inc., Racine, Wis., and Bayard S. Johnson of Franklin Research Co., Philadelphia, were elected chairman, vice-chairman and secretary, respectively, of the newly established Committee D-21 on Waxes and Polishes, American Society for Testing Materials, at a two-day meeting held in Washington, Sept. 14-15. They will remain in office until the annual meeting of A.S.T.M. in June 1952.

Elected chairman of subcommittees were: Donald B. Hanley, Bureau of Federal Supply, U. S. Treasury Dept., Washington, D. C., Subcommittee I, Nomenclature; Melvin Fuld, Fuld Brothers, Inc., Baltimore, Subcommittee II, Raw Materials; Don King, Masury Young Co., Boston, Subcommittee III, Physical and Chemical Testing; Michael Sveda, E. I. du Pont de Nemours & Co., Wilmington, Subcommittee IV, Performance; C. L. Weirch, C. B. Dolge Co., Westport, Conn., Section A, Slip Resistance; A. L. Sodergreen, West Disinfecting Co., Long Island City, N. Y., Section B, Permanence of Film; A. E. Budner, S. C. Johnson & Sons, Racine, Wis., Section C, Appearance; W. H. Joy, American Telegraph & Telephone Co., New York, Subcommittee V, Specifications.

Velsicol Chlordane Bulletin

Bulletin No. 38, "Chlordane for Soil Infesting Insect Control", currently is available from Velsicol Corp., 330 E. Grand Ave., Chicago.

McGinty Millmaster V.P.

Jerome F. McGinty, secretary of Millmaster Chemical Corp., New York, for the past year and one-half, was recently elected vice-president. He has been with the firm since 1946. During the Second World War he served as a Major in the Chemical Corps.

Charles L. Westenberg, assistant treasurer, was named treasurer, and Arthur Smith, formerly treasurer, was made secretary. At the same time, it was announced that the trustees had appointed John Languille, traffic manager, as assistant treasurer. W. H. McAllister continues as executive vice-president.

JEROME F. McGINTY

Myron H. Smith Dies

Myron H. Smith, president of D. B. Smith and Co., Utica, N. Y., sprayer manufacturers, died Sept. 13, at his home in Utica, after a long illness. A former president of the National Association of Sprayer Manufacturers (in 1934), he became general manager of the firm, which his father, Dewane B. Smith founded. He was elected president on the death of his father in 1922. Mr. Smith is survived by his widow and two brothers.

APHA Meets Oct. 30-Nov. 3

The 78th annual meeting of the American Public Health Assn. will be held in Kiel Auditorium, St. Louis, Tuesday, Oct. 3, through Friday, Nov. 3. At the same time, meetings of 32 related organizations in the field of public health and preventive medicine will be held.

Bri-Test In Bankruptcy

A settlement of 100 per cent, payable out of profits starting six months after confirmation and semi-annually thereafter, is offered to unsecured claims by Bri-Test, Inc., manufacturers of soaps and waxes, 845 E. 138th St., Bronx, N. Y. Settlement in full is offered to all priority claims payable in such amounts and at such times as may be agreed upon. The company filed voluntary proceedings, without schedules, under Chapter XI of the Chandler Act.

E. L. Newcomb Dies

Edwin L. Newcomb, executive vice president of the National Wholesale Druggists Association, died Sept. 2 in his home in Montclair, N. J., at the age of 67. Dr. Newcomb was engaged by the National Wholesale Druggists Association in 1925 as field contact representative for both the retail trade and proprietary manufacturers. In a reorganization of the association he was elected general secretary in 1926 and first executive vice president in 1933.

Dr. Newcomb's son, E. Allen Newcomb, is secretary of the National Wholesale Druggists Association.

Tamms SILICA
Soft Amorphous Type

Grades to meet various abrasive requirements . . . for all kinds of metal polishes.

Tamms TRIPOLI
Rose and Cream Colors

Once-ground, double-ground and air-float — ideal grades for buffing and polishing. Also rubbing compounds.

Preferred for POLISHES!

Tamms

Tamms products are widely used in the polish trade, preferred for quality results. Write today for prices and samples.

Tamms MULTI-CEL
Diatomaceous Earth

Top grade, ground extremely fine. A milder abrasive than silica. Best for silver polish.

Tamms BENTONITE
(Suspension Medium)

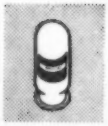
Very finely-ground colloidal clay. Wholly soluble — absorbs 5 times its weight in water.

Dept. RM-3, TAMMS INDUSTRIES, Inc., 228 N. La Salle Street, Chicago 1
Formerly TAMMS SILICA COMPANY

speed-up production with

POTDEVIN
LABEL PASTERS

Patented Glue Control Dial regulates amount of paste.



Economy-minded business men have discarded more expensive methods of labelling for modern, efficient POTDEVIN Label Pasters. Savings in work hours and stock costs quickly make up the cost of your POTDEVIN . . . and the work is always clean and neat.

Models available for 6, 8½, 12 and 18 inch labels, hand driven and motor driven.

Try a POTDEVIN for 10 days at no cost!
Label Paster Literature on Request

POTDEVIN MACHINE CO.
1256 38th Street, Brooklyn 18, N. Y.

Designers and manufacturers since 1893 of equipment for Bag Making, Printing, Coating, Gluing and Labeling.

POTDEVIN

...big sellers for the jobber

5 Year Guaranteed

***Per-Mo Mothproof Liquid**
packed in Pints, Quarts, ½ gal., gal. and 5 gal. containers or in Drums.

***Per-Mo Flameproof Liquid**
packed in Drums or gal. Containers.

***Per-Mo Rat & Mice Liquid**
packed in 8 oz. bottles or in Gals.

***Per-Mo Rat Bits**
made with RED SQUILL (Fortified) packed in 4 oz., 16 oz. and in Bulk.

***Per-Mo Rat Paste**
made with RED SQUILL (Fortified) packed in 4—8 and 16 oz. jars.

***Per-Mo Brown Rat Killer**
made with ANTU. Packed in 4—8 and 16 oz. jars.

*** ALL PER-MO PRODUCTS CAN BE PACKED UNDER YOUR OWN PRIVATE LABEL**

PER-MO
STANDS THE TEST
IT'S BY FAR THE BEST

Write today. Full particulars first letter

PER-MO PRODUCTS CO.
3602-04 S. Woodland
Kansas City 3, Mo.

REPRINTS OF SYNTHETIC DETERGENTS—UP TO DATE
BY JOHN W. McCUTCHEON (36 PAGES)

Reprints of the above article as it appears in current issues of *Soap & Sanitary Chemicals* are available from the author as a 36-page leatherette-covered booklet. The article consists of a review of the history, type and production of synthetics, their outlook and a list of over 700 trade name synthetic detergent and surface active products listed in alphabetical order. Each product is identified by manufacturer, class and formula, main uses, form, percent concentration, type and special explanatory remarks.

Prices: Single copy $1.00; 10 or more 75 cents each; 100 or more 60 cents each. Remittance must accompany order which should be addressed to

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.

State of mind . . .

HIT 'em with your advertising when their minds are on business, not when they are planning to go hunting,—or waiting nervously in a dentist's office. Hit 'em when their thoughts are of their own specific business problems,—when they are "business minded" and are reading for facts and not just to kill time,—by advertising in business or industrial publications which you know **specifically** serve their interests.

If it be in the field of soaps and detergents, insecticides, floor products, polishes, disinfectants, and other chemical specialties where their primary business interest lies, hit 'em hard and hit 'em direct without expensive waste circulation through the advertising pages of

SOAP *and Sanitary Chemicals*

254 WEST 31st STREET NEW YORK

Tale Ends

WE wonder what the renderers think of the tallow market now.

* * *

Laundry soap flakes compressed into cubes, each cube equal to a cup of flakes,—this is the suggestion for which a Pittsburgh newspaper paid a reader two dollars as a "new idea." For fifty years, we dope out ways and means, and expensive machinery, to make laundry soap into flakes, chips and powders for quick dissolving,—and then in 1950 somebody wins two bucks for reversing the process as a new idea. What a world!

* * *

A free shampoo and a finger wave are being given to the mothers of every 100th child born at the Blodgett Hospital in Grand Rapids, Mich. What next in give-aways? Well, gentle reader, we cannot miss the opportunity to throw in something as part of this generous offer. So, to the father in each case we will give absolutely free one bottle aspirin tablets.

* * *

It's "facial soap" which has been added to the U. S. Army "C Ration" packet from which the fighting men in the hot of it up front obtain sustenance midst the smoke, mud and stinks. Now, while the enemy drops in mortar shells and bloopers, Mr. Doughfoot can enjoy the quiet luxury of a good "facial" in the nearest mud hole.

* * *

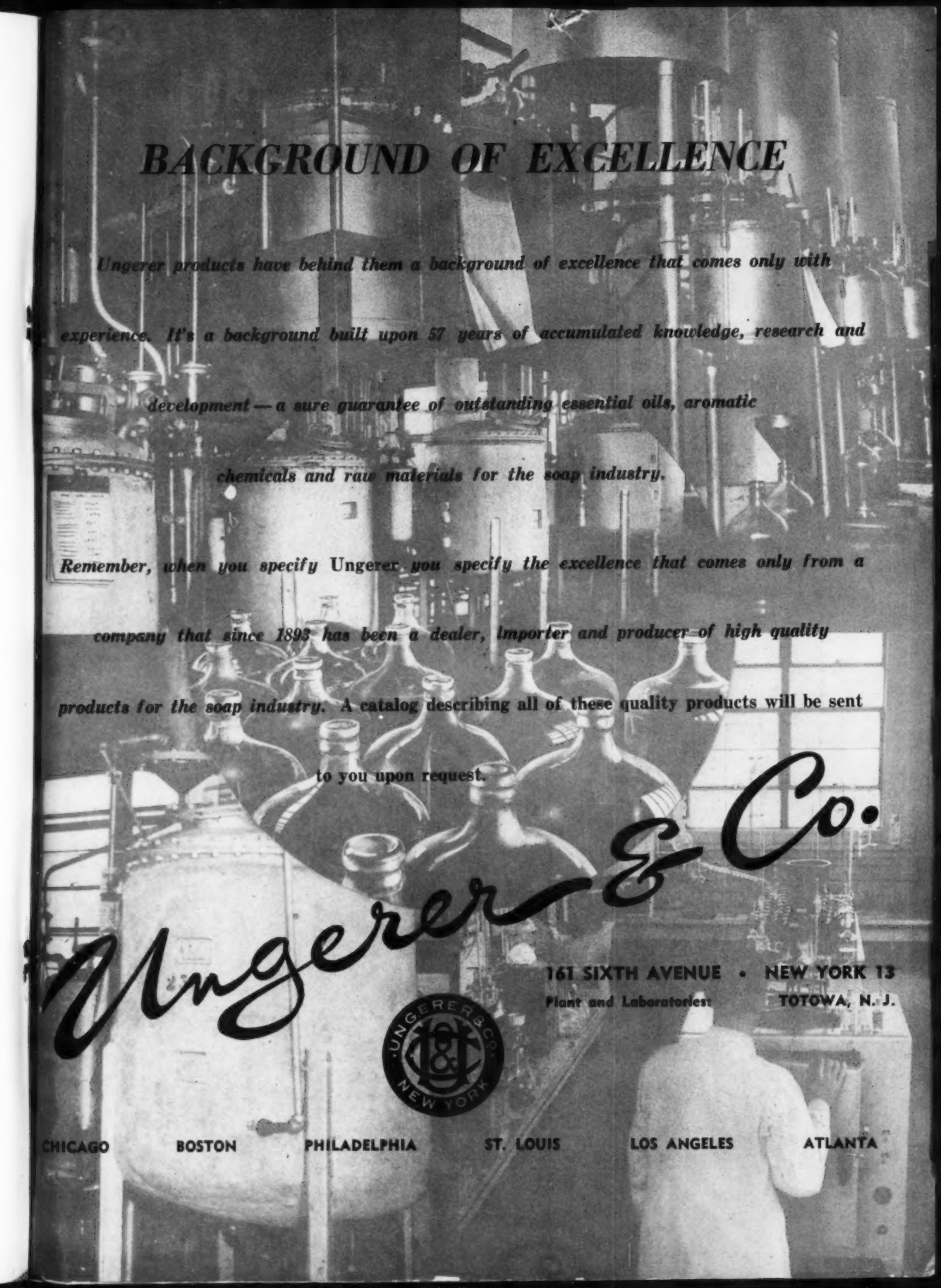
Margarine manufacture in America is under threat of monopoly control because 65 per cent of all margarine sold in the U. S. is made by *seven* large firms, notes Senator Herbert Lehman of New York. Might we remind the Senator that about 80 per cent of all the automobiles made in the U. S. are made by *two* large companies—and alongside of automobiles, margarine sales are strictly peanuts!

* * *

On steel drums, the manufacturers of potash soaps, cleaners, disinfectants, insecticides, *et al*, have done an about face. Whereas a few months ago, they found themselves unable to accept returned empty drums for credit, they now are asking their customers—please, oh, please, Mr. Customer, send back them empties! That's what the mess out in Korea has done for the used drum market.

* * *

Don't look now, but we think we see some handwriting on the wall. Our government—bless its benevolent and fatherly soul—has recently defined the term, "bread," and told us what it is and what it shall and shall not contain. Maybe some day not too far off, the great brains of Washington will get together and tell us what soap is, legally speaking. We can't imagine that those eager beavers who for some time have been searching about the hide of the soap industry with their spears will let this one get away from them, particularly with its wonderful "news" possibilities.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The safety of Solprotex was determined by the latest biometric evaluation. These tests were conducted both in America and in Europe under most capable pharmacologists. This assures a wide margin of safety under normal conditions of use.

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Animal experiments in the widest range were used to determine the physiologic harmlessness of Solprotex. Pathological examination of the tissue and organs of the animals tested showed no pathological significances.

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